

# Manufacturers Record

## Exponent of America



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Baltimore, Md.  
FEBRUARY 24, 1921

### A CRIME AGAINST CIVILIZATION

Hon. John Skelton Williams, Comptroller of the Currency, in his annual report estimates a decline last year of between \$12,000,000,000 and \$18,000,000,000 in the market or salable value of the products of our fields and forests and factories and mines. In addition to this, Mr Williams estimates that there has been a decline in the stocks of industrial corporations alone, listed on the New York Stock Exchange, of between \$3,000,000,000 and \$4,000,000,000, without regard to the enormous shrinkage in railroad securities.

In these statements Mr. Williams is very conservative. His outside figure of \$18,000,000,000 for the products of farms, factories and mines is not at all too high. In addition to the decline in the value of Wall Street listed industrial stocks, there has been an enormous decline in unlisted industrial securities all over the country. Add to the \$18,000,000,000 for farm, factory and mine products the decline in listed and unlisted industrial securities, the billions of decline in railroad securities, and we have a total shrinkage last year of probably at least \$25,000,000,000. Moreover, since the first of this year the decline has been very heavy.

Early last year the Manufacturers Record repeatedly said that the deflation policy of the Federal Reserve Board would cost the country more than the war cost us. Overwhelming proof of this is found in the figures given by Comptroller Williams, a member of that Board.

The war with Germany was a holy fight to save civilization. The war of the Federal Reserve Board to break down prices and prosperity was a crime against civilization.

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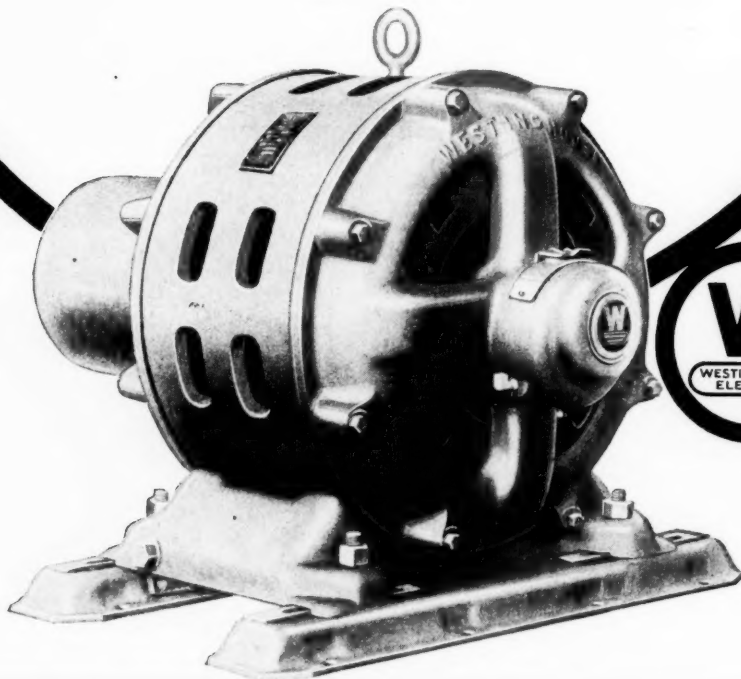
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# Manufacturers Record

Exponent of America

FEBRUARY 24, 1921

Volume LXXIX

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# Manufacturers Record

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of the South and Southwest as the Nation's Greatest Material Asset

Trade-Name Registered in the U. S. Patent Office

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## CUT COTTON ACREAGE ONE-HALF.

THE Wall Street Journal, commenting on the cotton situation a few days ago, said:

"Bears on cotton did not modify their views during the week. They remained intrenched behind the arguments of record surplus, **little likelihood of acreage reduction** and the improbability of a marked increase in foreign demand before the new crop."

The point which the bears were using with powerful effect is their claim that there will be no great reduction in acreage. If it can be shown that the South will decrease its cotton acreage by one-half, there will be a very marked increase in the price. A 50 per cent decrease in cotton acreage would, we think, quickly double the price of all the cotton in the world and maintain, certainly, that price for the coming crop. But a decrease short of 50 per cent will not have such an effect. The world must learn by actual work of the South that its cotton acreage is going to be cut in half. A larger acreage than that would, we believe, be a tremendous disaster to the South.

### A PHILIP GIBBS COMMENT.

PHILIP GIBBS, who is delivering lectures in different parts of this country, in writing to the MANUFACTURERS RECORD in regard to a recent editorial as to the importance of closer friendship between the United States and Great Britain, said that he "had read this with much interest and whole-hearted approval," and added: "It is the great object of my life to help forward, in the small way possible to my little pen, the good relations between our countries."

## NATIONAL SELF-PRESERVATION REQUIRES THAT AMERICA CLOSE THE DOORS TO UN- ASSIMILABLE ALIENS.

THE Senate Committee on Immigration has prepared and substituted a bill of its own in place of the Johnson Bill prohibiting immigration. A change in language of the act is important only in so far as it brings about or fails to bring about the results for which the Johnson Bill was drafted. These results are the suspension of immigration into the United States for a period sufficiently long to permit of the enactment of legislation such as will enable the United States as a nation to select those racially and otherwise suitable for amalgamation with our people, and the barring out of the low-grade refugee outcasts and unfit of Central, Eastern and Southern Europe, as well as the members of other races even more foreign to our polity and ideals.

The proposed measure as reported out of the Committee on Immigration to the Senate with favorable recommendation would become effective April 1 of this year, and would be effective for 15 months. In a broad way its inhibitions provide that during the period of its operation immigration shall be limited to five per cent of the alien nationals in the United States, according to the census of 1910. Census figures show that there were in the United States in 1910 13,515,000 of these alien-born. Permissible immigration, therefore, under the contemplated act would in round numbers be 675,000.

THE MANUFACTURERS RECORD believes that there should be a total cessation of immigration until we as a nation shall have framed a new and rational immigration policy. We believe that there should be enacted an immigration law that takes into consideration actual conditions; one not based upon idealism or internationalism or greed. Facts should be looked in the face; the lessons they teach learned and applied. Our racial integrity, advance, even existence, compel it.

The unhappy hordes of Europe, and of the world, may not longer be permitted to find sanctuary in these United States. The gates through which they seek to pass must be closed and at once, and no fallacies of fancied need nor world brotherhood compel their reopening. The plea of the sentimentalist, the internationalist and of the interest greedy for cheap labor alike must fall upon deaf ears.

Evidence adduced at the hearings on the immigration bills before congressional committees shows that the vast majority of those seeking entry in our land are of the lowest types, physically and in other ways, in the lands they seek to flee. Largely they were bred in regions and amid conditions every thought and impulse of which run contrary to the thought and aims of America.

It is a truism that racially inferior accretions to a civilization do not "level up." Racial increments of a lower grade bring down the standard of the higher; not only by precept and example, but the lower grade, by underliving the higher, in a competitive existence, outlives it. The higher is submerged, crowded out and vanishes.

Frankly we believe that there are all too many low-grade

aliens in America today. Lothrop Stoddard in his "Rising Tide of Color" declares that "there is no more absurd fallacy than the shibboleth of the 'melting pot.' As a matter of fact the melting pot may mix, but it does not melt. Each race type formed ages ago and 'set' by millenniums of isolation and inbreeding is a stubbornly persistent entity."

We believe that given the proper period for consideration as the result of the shutting off of immigration by statutory enactment the Congress should and will enact such legislation as will create for America a definite immigration policy; one that will admit to these United States only such alien-born population as will in time become an integral part of our nation, sharing in its aims and ideals; willing if need be to die in defense of the doctrines of the founders of our republic.

We are printing a letter from Mr. Prescott Hall, secretary of the executive committee of the Immigration Restriction League. Mr. Hall says:

Boston, January 28.

*Editor Manufacturers Record:*

Allow me to commend your recent editorials on immigration. The characteristics of the only opposition to proper restriction were never brought out more clearly than at the recent hearings before the Senate committee. This opposition was composed, as it always has been, of steamships, railroads, big employers of cheap labor and representatives of Jewish societies—in other words, of those who have some personal interest in keeping the door wide open.

Up to the Civil War this country and its political and social institutions were developed by Nordic races exclusively. At the present time about one-half our people are Nordic, while immigration is almost entirely Alpine, Mediterranean and Semitic. If a million or two of immigrants should come annually in the next 20 years, it is obvious that the balance of races in this country will change. This means either a profound alteration in our political and social institutions, or an ineffectiveness born of a mixture of heterogeneous elements, and very likely both. It is much the same problem as that of Oriental immigration, only not so striking. It matters not whether these other races are better or worse in some respects than we are; they are *different*. And, as Le Bon says, a preponderance of those foreign, not merely in name but in ideals, habits and character, destroys a nation's most valuable possession—its soul. The case of the downfall of Chaldea, Phoenicia, Carthage, Egypt, Greece and Rome was in each case not war, but the peaceful infiltration of alien races.

The best remedy in sight is that based upon the capacity for assimilation, as shown by naturalization, where not artificially induced. The Nordic races have been the ones to become naturalized. H. R. 10,837, now pending in Congress, limits immigration to from 20 to 50 per cent of the number of those naturalized from the various countries at the date of the last census. On the maximum limitation of 50 per cent such a bill would, in 1914, a year of large immigration, have allowed five times as many to come as actually did come from Northern and Western Europe and would have shut out two-thirds of those who came from Southern and Eastern Europe, cutting the total immigration in half, and favoring the coming of the more easily assimilated races.

Neither inspection abroad nor distribution nor "Americanization" will accomplish anything until the total volume of immigration is reduced by cutting off the invasion of the more alien types.

PRESCOTT HALL.

## GERMANY'S INVASION OF AMERICA.

**C**OMMENTING on the tremendous campaign which Germany is making to capture the American market and break down our industrial interests exactly along the line stated in the article by Mr. Benj. K. Raleigh, our European correspondent, the Drug and Chemical Markets, in a recent editorial said:

"Recent accounts of Germany's plans to capture American markets, evidenced by heavy imports at cut prices, are confirmed by representatives of Great Britain, France, Italy and Belgium who attended the meeting of technical experts of the Allied Nations in Paris, and whose statements appear in another column of Drug and Chemical Markets. The contradictory reports which have come out of Germany concerning conditions there are explained, and the working methods of the syndicates outlined.

"A list of products upon which the German manufacturers are

concentrating indicates the comprehensive nature of the commercial invasion now in progress. It is not confined to dyes, chemicals and rugs. Even the cheap but trusty automobile is to be duplicated and exported. Typewriters, jewelry, artificial silk and rubber goods are on the list. Germany's hosiery, underwear and glove industries have been revived, and these goods are coming again at prices even lower than before the war.

"It has been said that the United States is a sleeping giant, but its strength lies in its industries, and unless the country awakes to the situation soon the Samson of America will be shorn of his locks and powerless to meet the attack. Manufacturers place their faith and hope in the new Administration, but no time is to be lost in warning Senators and Congressmen from industrial centers of the danger."

To this let us add the following from the weekly iron market report of the Matthew Addy Company, iron merchants of Cincinnati, who, under date of February 12, said:

"The other day an Ohio manufacturer received a sad shock when he found that the Germans had underbid him on a sugar mill in Cuba, not only made a much lower price, but offered the Cubans a **two-years' credit**, whereas his terms were cash against documents. This is just one sign of the new and altered times."

Here is a German firm offering two years' credit to a buyer, and yet that lying nation is pretending that it is desperately poor and cannot pay the reparation demanded by the Allies which, unfortunately, was too small anyway!

## THE FARMERS' TRUE VIEWPOINT.

Bartow, Ga., January 31.

*Editor Manufacturers Record:*

The great exponent of the League, etc., together with a miscellaneous gang of newspaper economists who know more about farming than any farmer ever did, say we must produce and sell our farm products at prices antedating the great war. With his almost autocratic power he has almost made us do so.

Many have been forced into bankruptcy. What we want to know is how they expect the remainder to remain solvent. But perhaps they don't. Commercial fertilizers cost as much as they did when cotton was above 40 cents. Plows, plow parts, farm gear, cost the farmer the same as 12 months ago. Taxes are higher than one year ago. Railroad fares and freight rates are still at their highest peak. There has been a slight decline in groceries and clothing.

The net reduction in cost to the farmer of living and carrying on does not amount to 10 per cent. Can he sell his crops 75 to 80 per cent cheaper and remain out of bankruptcy? There must be some way of doing this, or the immortals would not tell us we must. But will they kindly elucidate? We know they cannot.

M. W. SALTER.

P. S.—Will you print the above in your magazine, not to humor me, but in the interest of common justice and fair play? You city people cannot understand the hopeless situation as it really is of the cotton farmer, who has both the boll-weevil and a hostile Government to contend with.

M. W. S.

Mr. Salter has asked some important questions in harmony with many that the MANUFACTURERS RECORD has asked.

What the farmer buys has not decreased in proportion to the more important products which the farmer sells, nor is there any likelihood that there will be any adjustment which will reduce the farmer's cost of production to such an extent that he can live at present prices of his products.

But it must be remembered that the plan of the Administration started by President Wilson in August, 1919, was for a definite breakdown of prices of all food products. Mr. Wilson promised the railroad brotherhoods at that time that the full power of the Government would be used to bring about a lower cost of living. This could be achieved only by breaking down the prices of farm products as the starting point. Secretary Houston and Governor Harding promptly took up this promise, or acted in harmony with it, and did the best they could to break down prices, and the South faces the fact that its prosperity was slain by those who claim the South as their birthplace. "The South was betrayed in the house of its supposed friends."

## Secret Cotton Deal of 1915 Shows That Market Can Be Manipulated Without Public Knowledge.

THE night of August 25, 1915, Mr. W. P. G. Harding, then a member and now governor of the Federal Reserve Board, delivered an address before the Alabama Merchants' Association at Birmingham. The next morning the Birmingham News editorially stated that the address was devoted exclusively to "the cotton situation in the South, in the light of the European war, and the decision of the Allies to make contraband of cotton." The News lauded Mr. Harding as a life-long student of finance, and declared that "he treated his subject with the skill and breadth of an experienced banker, knowing precisely how things have been done and how things can be done."

The News spoke more truly than it knew. Indeed did Mr. Harding know "precisely how things have been done and how things can be done," because before making that speech the gentleman in question had been summoned by the President and had been instructed by him in reference to the speech. And at the moment that Mr. Harding was telling the good people of Alabama that he did not think serious results would follow from the British order declaring cotton contraband, he knew, because he had himself participated in the negotiations, that an absolute understanding had been entered into with the British Government which guaranteed the minimum price of every pound of cotton in the United States. Yes, he knew "precisely how things have been done and how things can be done."

"Cotton market figures for today were higher than they were last Friday. I don't believe serious results will accrue from this order of contraband," says the News report of the Harding speech. That was on August 25. The Friday before had been August 19. It was the next day, August 20, that the British officially declared cotton to be contraband, which made operative the agreement to bring the price up to a minimum of 10 cents the pound.

The facts are interesting. The British Government had "felt out" the attitude of the American Government on the question of declaring cotton contraband. Apparently the answer had been a good American answer—"we will ship our cotton to neutrals, if and when we want to, if it has to be sent under naval escort." So the British came back with a new suggestion that if the American Government would agree only formally to protest against the contraband order, they would guarantee that the price of American cotton would not fall, but would rise to a minimum price of 10 cents the pound. The British Ambassador, Spring-Rice, was conferring with the President himself on the matter. The President himself, at that moment, we have reason to believe, felt that England was fighting the battle of civilization, on which account, as well as for the greater good of the cotton-producers, the deal could be justified.

Mr. Harding was scheduled to make an address in Birmingham. It could be made an important utterance. Moreover, it was requisite that the South should be given a soothing word, as the announcement of the contraband order was otherwise certain to induce panicky conditions. So the President sent for Mr. Harding, and they went over the situation together at some length. It was decided that Mr. Harding should sound a hopeful note, which should be reinforced by a letter from the President, the hopefulness to be based on the willingness of the Federal Reserve Board to help finance the cotton crop, and no hint to be given of the truth that not economic law but a secret international agreement was the cause for the otherwise inexplicable rise in the price of cotton.

The President's letter, as quoted in the News, was as follows:

"Thank you sincerely for your letter of August 23. It gives me just the information I desired.

"What interests me most is this: It is evident from what you tell me that the country banks with whom the farmer and other producers directly deal can get money at from 4 to 4½ per cent., and that the question whether the benefit of this advantageous rate is to be extended to the farmer is in their hands, for it is inconceivable to me that those who are responsible for dealing directly with the producers of the country should be willing to jeopardize the prosperity of the country itself by refusing to share with the producer the beneficial rates now attainable for money loans. I think that we can confidently expect that the banks in the cotton States and in the agricultural regions generally, will content themselves with a rate not more than 1 or 2 per cent above the rate which they themselves pay. I hope that the facts which you have stated to me will become generally known among the producers of the country so that they may feel themselves free to exact of the banks with which they deal what they undoubtedly have a right to expect."

So, in line with this letter, although perfectly well aware that it was not storage facilities or immediate banking facilities, but a secret government agreement that was putting life back into the cotton market, Mr. Harding went ahead to explain to the Alabamians just why normal economic law would enhance prices. Some of the things he said are extremely interesting in view of what has since happened. Our quotations are from the News report of the speech.

When asked why Liverpool had always been the center of the cotton market, he said "he was glad the question had been raised, for it reminded him to say that England had been receiving our best cotton and at the best prices. Because the South had permitted this to happen, England had been able to keep the price of cotton at figures to please herself." Mr. Harding knew what he was talking about, because had he not just come from conferences where England had fixed the minimum price in return for a course of action by the American Government?

"Mr. Harding said the South's welfare depends upon the marketing of cotton at fairly remunerative rates, and Southern bankers should, wherever possible, make liberal concessions in their usual rates on commodity loans. **High interest, he pointed out, means forced sales.**"

"The attitude of Great Britain and her allies (in declaring cotton contraband) has created much uncertainty in the cotton trade and great apprehension on the part of cotton producers in the South." He could have dissipated that uncertainty in one minute had he told what he knew of the secret agreement.

"You have an opportunity of conserving the value of the South's greatest asset, and upon you, Southern bankers and merchants, rests the responsibility of the weal or woe of a great agricultural section, perhaps for years. Leading financiers freely express the fear that the sudden prosperity developed in some sections and along certain lines of industry will be followed by a period of wild speculation and inflation. The banking reserves of this country are considerably more than one billion dollars in excess of legal requirements. Our gold holdings, over two billion dollars, are larger than those of any other two countries combined. Our trade balances are piling up unprecedentedly, probably amounting to a billion dollars during the last six months of 1915. What better security could a Southern bank ask than the obligation of a merchant or farmer which he has been carrying on a crop not yet existent; what better investment than to carry this obligation along for a few months, if necessary, secured by the actual



cotton properly warehoused and insured and certain of a market. \* \* \* Do not sit supinely on the ginhouse floor to be smothered beneath a mass of cotton, but keep on top the heap, and feed it out, at living prices, to the spindles and factories of a waiting world."

Not in sorrow and in tears would the South be today, if the policy so outlined had been followed by the Federal Reserve Board these last two months. But as an economic prophet, that August day in 1915, Mr. Harding was not running the risk of incorrect diagnosis. He knew what was going to happen. An agreement had been made that it must happen.

It is not surprising that men lose faith in statistics and the claims that market prices are natural, not manipulated. Here was a man high in the Government, fortified with a letter from the President of the United States, solemnly massing a lot of statistics and rules and rulings together and offering them as a reason why something was likely to happen, although all the time he knew that the thing had to happen for an entirely different reason.

We are not complaining necessarily because the arrangement with the British was made. Certainly we are not complaining, if at that time the President felt that the British were fighting the battle of civilization. We could only wish that to that view he had adhered, and that he had not a year later gone before the country as a candidate for re-election on the plea of absolute neutrality, declaring that "he kept us out of war," and rather intimating that he would continue to do so. One wonders, if it was then the determination to help England in the stupendous conflict, why it was done at a price, and why secretly? Men who have in all solemnity once acted a part and kept the people in complete ignorance of essential facts, ascribing to economic causes events which they knew were the result of manipulation, cannot readily be trusted at other times and in other circumstances to be more open and frank.

If, in 1915, there was an international and secret agreement to raise the price of cotton, who knows that there was not another secret and international agreement in 1920 to force the price of cotton down? The power to manipulate by such means having been proved once, the temptation to employ it again would be great. Moreover, one is struck by the fact that Mr. Harding, then at Birmingham, said that it was time for the bankers to do as the railroads, "give excursion rates," in order, said the News, that "the merchants can help the farmers hold their own until the spinners of the world are convinced that they cannot buy it at less than its fair market value." The Federal Reserve Board has been driving cotton on the market irrespective of fair or any other market value. It has utterly and absolutely reversed the policy enunciated by Mr. Harding at Birmingham, although the banking reserves are still considerably more than "one billion dollars in excess of legal requirements."

In our opinion, the ruinous prices of cotton today are manipulated prices, prices forced to lower levels by action of the Government, and this driving down has been the result of deliberate conference just as much as was the price increase in 1915 brought about by manipulation and agreement.

As to the morality of secret price-fixing by Government officials, either between themselves or with another Government, we make no comment. The public can judge for itself.

### THE PARTY LASH HAS LOST ITS POWER.

THE enthusiastic way in which Democratic Congressmen have lately voted to override President Wilson's vetoes only serves to indicate how eagerly these same men would have voted against many of Mr. Wilson's plans in times

past, but they feared that if they did so he would succeed in defeating them for re-election, or prevent them getting any party patronage. The fact that they voted according to Mr. Wilson's demands in the past was not proof of their belief in the wisdom of many of his movements, but the party lash was great enough to hold them in leash. Now that President Wilson's power has been broken, they gleefully take their revenge by voting against him, and yet people and papers who have for years seen some of the mistakes made by Mr. Wilson, such, for instance, as the Adamson Bill and other things of a similar character, have been bitterly denounced because, uncontrolled by the party lash, they expressed their opinions freely.

### HOW FAR HAS GERMANY ALREADY GONE IN CAPTURING AMERICAN TRADE OUTPOSTS?

VERY recently we discussed Germany's plan for the subjugation of America through commercial conquest. An article from Mr. Ben. K. Raleigh, our European correspondent, at the same time outlined what the Hun-at-peace has in contemplation for world domination.

We are in receipt of the following correspondence from Mr. Charles J. Bills, president Sixteenth Engineers' Club, Cleveland, O.:

*Editor Manufacturers Record:*

Am enclosing herewith for your consideration letter sent to Sears, Roebuck & Co., Chicago, and their reply to same.

CHARLES J. BILLS.

Sears, Roebuck & Co.:

Gentlemen—I am in need of a set of drawing instruments, and have found a large assortment in your catalog which has just been handed me.

At the top of the page I find, "for the first time since the great war so seriously interfered with the importation of European products, we are able to offer imported drawing instruments again." You do not state that these instruments were made in Germany, but neither do you state that they were NOT made in Germany. Before placing my order I wish to ask one question: Have either German capital or German workmen been employed in the production of these instruments? Was in the service overseas for nearly two years, so you can appreciate my position.

CHARLES J. BILLS.

The following reply was received:

The drawing instruments we are now selling were made in Germany. Should you decide to purchase one of these sets from us regardless of this fact, we will be pleased to receive your order and will give it our prompt attention.

A small thing? Yes, in proportion to our national trade and vast commercial development, a very small thing. The coral, too, is a small thing, and yet that almost imponderable insect, building and dying, building and dying, creates slowly and certainly a structure firmly founded in the ocean's depths that in the form of a reef may rip apart the timbers or destroy the plates of the stoutest ship.

The tentacles of that giant octopus that is Germany's trade already are groping over and grasping the buttresses of American business life. Thousands of homes in America buy in part, if not entirely, from the huge mail-order houses of the country. If it be that through these media Germany's war by trade conquest is well under way, and the correspondence above would give good ground for that idea, then, indeed, is Congress recreant to the nation if it longer fails of the enactment of a tariff wall that will stop these advances.

America alone of the great nations of the earth hesitates while the tide of Hun-made products grows into a flood menacing our commercial life. Congress must awake and erect the barriers ere the flood overcomes us.

Our only safety is to bar out German products and develop our own.



## Let the South Beware Lest It Lose Control of Its Educational System

**A** MORE or less imposing array of federations and associations and clubs are quoted as enthusiastically endorsing the Smith-Towner bill. This bill undertakes to establish a Department of Education with a secretary at the head of it who shall sit in the Cabinet. It carries an appropriation of \$100,000,000, of which \$7,500,000 would be for the removal of illiteracy, a similar amount for the Americanization of the foreign-born, \$50,000,000 for equalizing educational opportunities, \$20,000,000 for physical education and sanitation, and \$15,000,000 for preparation of teachers.

The World Digest of Reform News, issued by the Board of Temperance, Prohibition and Public Morals of the Methodist Episcopal Church, states that "the one opposition to it is from the Roman Catholic Church." It also says that "the work of Americanization and the stamping out of illiteracy could be completely accomplished by the provisions of this bill within ten years." We know positively that the opposition is not confined solely to the Roman Catholic Church, for the MANUFACTURERS RECORD is certainly to be numbered among those hostile to the bill. We should say that anybody who imagines that complete Americanization of the foreign-born, and the abolition of illiteracy can be accomplished under the terms of the proposed measure, or any other within 10 years, is extraordinarily optimistic, and but poorly informed as to the true status of affairs.

The bill is contradictory in its provisions. In some sections the principle of Federal supervision is very obviously set forth; in others the principle of exclusive State control appears to be adhered to. But even if the bill, in every section, stated in the most emphatic language that it was the intent never to attempt or permit interference with State control, we should say that every such statement amounted to nothing. Those writing the bill might sincerely believe that no encroachment on State authority would follow. But the flow of events would repudiate their promises. They would wake to find that education in America was under the dominance of a bureaucrat in Washington. That would be the inevitable event.

It is not reasonable to suppose that the United States would expend millions without control of the spending units. The Secretary of Education and his whole office would constantly be seeking to enlarge his sphere of action. The contention was made and proved to the satisfaction of the Colonists that when the Colonial judges were paid their salaries from London, it was to London that they gave first consideration. Communities drawing school funds from Washington will do as Washington says, sooner or later.

An object of the agitation of which the bill is a result is the training of all American teachers at a central instruction place in Washington. The vagaries of a particular professor would be taught as gospel truth from one end of the country to the other. Education would be standardized. We know of nothing that could be more fatal to independent thought and development than that.

What the bill is really aimed at, however, is not merely the setting up of an educational autocracy and dictatorship, but at the Southern States. Once let the principle involved in this law be recognized, and it will not be long before the appropriations for this or that State will be made contingent on the acceptance by that State of an agreement to make no differentiation between white and colored pupils in the schools. The South would find itself dedicated to acceptance of racial equality in the schools, under penalty of having to pay taxes for the support of education in other States only. It may be said by those favoring the bill that this is a remote contingency. Let any man in the South ask himself if he wishes a condition of affairs where some politician in Washington will be deciding on the textbooks to be used, on the

kind of history to be taught, and as to what he might call democracy in the schools.

We do not want Democratic schools, or Republican schools, or Socialistic schools. We do not want the type of education to be determined by a general election. We do not want a Federalized educational system which would form the nucleus for a new sort of political machine. We do not want that little red schoolhouse on the top of the hill to have a teacher who looks to Washington for instruction. We do not even want cold-blooded, machine-like education. No community gets anything for nothing from Washington. No dollars flow from the Federal till unless they have first flowed in there. Any State can better afford to pay its taxes directly for the support of its own educational system than to pipe the taxes first to Washington and then have them, in part, piped back again.

It may be that gentlemen in other parts of the country do not like the educational system in vogue in South Carolina or in Mississippi and would like, by exercise of the Federal authority, to intervene. But South Carolina and Mississippi can take care of their own affairs. They are probably both sick unto death of philanthropists who, six days of the week manipulate the market to drive cotton below cost of production, and on the seventh offer part of their profits back as charity. Illiteracy in the South is the result of outrageous economic conditions which cannot be cured by Federal money grants. The hand that rocks the cradle is the hand that rules the world, but mighty also is he who writes the textbooks of a nation.

We do not question the sincerity of those who believe that the Smith-Towner bill is a desirable measure. But we conceive it to be our duty to warn the States generally, and the Southern States particularly, to look this gift horse in the mouth. The States have been robbed already of almost every power specifically reserved to them by the Constitution. If they are going to surrender, also, control of their own educational processes, they may as well just give up the local governments and consent to be ruled entirely by emissaries appointed in Washington. We can solve the illiteracy problem without giving up our form of government.

The price of liberty is eternal vigilance.

### GERMANS PRESENT FIGHTING MACHINE AT WORK.

**I**N its issue of February 9 the Iron Age, discussing the activity with which Germany is pushing its export business into this and other countries, said: "Competition in steel from the continent of Europe looms up as a large possibility. In export calculations, Germany's chance is growing better. **Some German punching and shearing machines undersold American machines in Northern Ohio this week.**

German industrial interests, leagued and backed by the Government, are carrying on the most gigantic campaign ever undertaken in history to push their products into other countries at a low cost, not only for the direct benefit of their business, but for the express purpose of breaking down the industries of other countries. Germany's war on industry will be as vigorous and as vicious as was its war against civilization on the battlefields of France and Belgium and its accused sinking of the Lusitania and other passenger ships.

Out of German universities have come the atheistic doctrines which have cursed the world, followed by Germany's war against civilization and Christianity, and now we have Germany's industrial warfare against the rest of the world. Surely we need to watch the situation and to realize that the destruction of industry by Germany would be as far-reaching in its final effect as would have been the success of German armies in the great battle of barbarism against civilization.

## A TRUE STORY AND ITS LESSON.

A YOUNG lady on a visit home from one of the leading colleges of Massachusetts made some very rankly socialistic remarks which so astonished her father that he asked her what she had been studying at college. One of the replies was that the United States Steel Corporation kept its men at work twenty-four hours a day and seven days in the week. Her father asked her where she had learned such stuff, and she said her teacher had told her, and insisted that this was from a report of the United States Government. Her father tried in vain, for a few moments, to make her understand that twenty-four hours a day was the full measure of the night and day, and that therefore it was a physical impossibility for the Steel Corporation to keep its men at work for such a length of time, but she protested that her professor, in one of the foremost woman's colleges in Massachusetts, had taught this to the class, and claimed that she was getting it out of a report made by the Government.

Some may say that this girl lacked a certain degree of intelligence when she failed to catch the idea that a twenty-four-hour work day was a physical impossibility, but it took her several minutes to grasp her father's explanation, because the other side of the story had been driven home so vigorously by her teacher.

But why should anyone be astonished at the mistake of this young girl? Her mistake is not greater than that of many teachers and preachers. The world is full of misinformed people who get deep into their souls, if they have any souls, ideas just as foolish as those of this college student. She is the daughter of a great manufacturer, who is widely known for his care of his employees, and yet she had gained the idea that laborers in this country were so mistreated that many of them worked twenty-four hours a day consecutively and seven days a week.

It is a well-known fact that socialistic doctrines as rank and rotten as the impression that this girl had gotten are being taught in many colleges and from many pulpits in this country. The whole college life of America is full of such false teachings. Socialistic teachers by the thousands are filling the college students of the land with doctrines which are as contrary to the truth as was the idea that this young girl had gained from the teaching received in a great Massachusetts college.

There has recently been issued a pamphlet entitled "Making Socialists Out of College Students." It is published by the Better America Federation of California at Los Angeles. It is a story dealing with some of the professors of our colleges who associate with the most radical element in this country and who teach the most radical doctrines. It quotes from the teachings of many of these socialistic leaders statements which would do credit to Trotsky and Lenine, and it shows that among the group of editors and college professors who are carrying on this campaign are many men identified with widely read newspapers and magazines and with many of the foremost colleges in the United States. The doctrines taught by these people are so false in morality and so false from every other standpoint that sometimes intelligent men seriously question whether it is worth while risking the whole future of their daughters and sons by giving them the opportunity of a college course. Many of the colleges of the country are hotbeds of socialism and bolshevism, and there are a great many pulpits in the country filled by the same class of men.

In discussing this situation Mr. Alonzo B. See, in an article recently published, said:

"College professors are Socialists. A newspaper asked, 'What is the use of spending money and sending a boy to college to become a Socialist when he can remain at home and become one?' There is no difference between socialism, I. W. W.ism and bolshevism in their ultimate outcome. They all mean the

forcible taking from the people of the things which they possess, and the forcible taking from the people of the things which they possess inevitably leads to anarchy.

"The province of the ministers is to speak words of comfort and encouragement and to seek to raise men to better thinking and to better living. A minister should use care in referring to things outside of his calling. When I was in my teens a minister wishing to show the two opposing forces—good and evil—used as his illustration the steam engine, and said the engine struggled to run away and the governor struggled to hold it back. Any apprentice boy in the factory in which I then worked could have told him that the office of the governor was to regulate the flow of steam. I could not listen to that minister after that with any degree of satisfaction.

"Some ministers proclaim that they believe in the closed shop. Do these ministers mean by the closed shop that a man should not be permitted to pursue his lawful, chosen vocation because he has failed to join an organization? If they do, they should come out man fashion and say so. The truth is they do not know what they mean, and because they do not know what they are talking about they are held in contempt by those who know the facts."

## TEACHERS OF RADICALISM MUST BE DRIVEN OUT OF THE TEMPLES.

CHARGES recently made before the twenty-first annual convention of the Civic Federation in New York are of such a nature that the churches against which they were brought cannot be fair to themselves as Christian bodies and keep silence. Failure to speak would be tantamount to a tacit admission that the socialistic cancer is of greater extent, more far-reaching and deadly in its hideous power, than the Christian world at large believes.

Everett P. Wheeler, chairman of the committee appointed by the Federation to investigate radical activities, in making his report to that body has declared that the Socialists, Communists and other subversive elements have gained a foothold in the Presbyterian, Episcopal and Methodist churches; that indications pointed to the same tendency in the Roman Catholic Church, and that there was unmistakable evidence of the activities of these elements in such non-sectarian religious bodies as the Y. W. C. A., Y. M. C. A., and even the Red Cross.

Mr. Wheeler is a lawyer, publicist and student; his work on these investigations covered ten months, and specific information which he had prepared for the executive council of the Federation indicates, he avers, that not only have the churches been penetrated by these radical agencies, but that newspapers, schools and colleges similarly are affected.

The obligation upon the churches named that they clear their good name by replying to these charges is unavoidable. They are made publicly before the Civic Federation, a body of high standing, and by a man fitted by thought and deed to represent such a body. It cannot be argued that a man's political and religious faith are distinct entities when that man is professionally a preacher of the gospel of Christ. Socialism, communism and their allied tenets carry with them features inherently foreign to the doctrines of the Great Teacher of Nazareth. Teachers and preachers of these doctrines must no longer be permitted traitorously to fight clothed in the armor of righteousness.

An equal duty is imposed upon the men preaching red radicalism in the temples of God. If there is within them one shred of honesty of purpose, they should cease their organized masquerading under titles so worded as to create the impression that they represent recognized branches of the churches of Christ.

Interchurch federations and church leagues for this and for that are not truly representative of church denominations; nor are they truly church organizations at all. They are political, not religious; to speak of them or to conduct them otherwise is a living lie.

Editor

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## A False View of the Railroad Situation

Punta Gorda, Fla., January 20.

*Editor Manufacturers Record:*

"Which shall live—railroads or producers?" That is the paramount question now. The railroads say that they cannot live at the present rates, high as they are, and the producers say they cannot live if they have to pay the rates now in force. Under existing circumstances both are right. Now, which one shall we sacrifice? One must go under that the other may survive. If production is destroyed, as the high rates of transportation threaten, what will be left for the railroads? As long as production is profitable, the railroads have all the business they can handle. Tax production to death and the railroad will perish.

The root, so to speak, of the whole problem may be found in the admitted overcapitalization of the railroads. They have bonded and bonded and watered their stock until, in the case of the Florida Southern branch of the Atlantic Coast Line, for instance, they are trying to pay dividends and interest on three times the original cost of the roads. It is as if a merchant had paid \$15,000 for a \$5000 stock of goods and was trying to force his customers to pay him a return on the extravagant price paid for the goods instead of on the actual value. If his customers refuse and he cannot sell and pay his debts, what does he do? Appeal to the town or Federal Government to help him? Nay; he goes into bankruptcy. Nearly 80 per cent of the merchants of the country fail in business, but it never occurs to anyone to urge that their customers make good their losses. Then why should the railroads ask this special favor?

For what were their charters granted? To give them certain extraordinary rights, such as eminent domain, in return for the implied, if not distinct, contract that they would transport freight and passengers at living rates. Not only this, but the Legislatures of various States made enormous grants of the people's lands to railroads, the objects of which grants have long been forgotten by the roads. There were two objects in making these huge grants of the public domain, viz.: First, the development of an uninhabited territory and the consequent big addition to the State's taxable wealth. Second, to reimburse the roads for losses incurred in operating their lines at reasonable rates through an uninhabited and unproductive territory. The development of the territory was accomplished, but this was all. The roads persisted in levying exorbitant rates to the extent that, in one instance at least, that of the Atlantic Coast Line, dividends of 25 per cent were earned and paid. These things caused a clamor on the part of the people and led to the establishment of commissions to curb the rapacity of the railroads.

Now, when all these facts are brought up in advocacy of living rates for producers, the managers of the roads allege that they cannot, without injustice to innocent purchasers of bonds and watered stock, grant the necessary reductions in charges. By this reasoning the purchasers of gold bricks ought to be reimbursed by the people or by the Government, both of which propositions are in effect the same. The appeal in behalf of "innocent purchasers" must be ignored if production is to prosper and the country to be saved. There are "innocent purchasers" in all lines of business, but only those who invested in railway securities are to be protected. This is all wrong. No man, whether stockholder in a railroad or an ice factory or owner of a jitney bus, should expect the Government to protect him from loss in his business venture.

The conclusion of the whole matter is that the railroads should go into bankruptcy and be sold to the highest bidder for what they are actually worth, extreme care being taken to prevent any combination of capitalists from buying them at two or three times their real value and taxing their customers accordingly. No other solution of this great problem seems possible. A. P. JORDAN.

Rarely have we seen a more misleading article than the foregoing letter. Mr. Jordan starts out with the assumption that there is an admitted overcapitalization of the railroads of the country. That is incorrect. The railroad system of the country could not possibly be duplicated at the present capitalization, stocks and bonds. Indeed, at present cost we venture the assertion that the intrinsic value of the railroad properties of the United States is largely more than double the total capitalization.

It is true that when railroads were built their capitalization, including bonded indebtedness, was in excess of the actual cost of building, but this excess capitalization was the bait which induced people to build railroads. No one would ever have invested his money in the uncertainty connected with railroad building for a possible 5 or 6 or 7 per cent of bond

interest on the actual cost. Every investor knew too well the dangers of railroad construction, and so to tempt money into the enterprise a considerable amount of common stock was often given as a bonus to the bondholder, or the bonds were sold below par, thus giving him a speculative chance to offset the danger of a complete loss of his investment. But years ago all of this so-called water had been squeezed out of the railroads. There is probably not a railroad in the United States that could today be duplicated for anything like its total capitalization.

There is no more reason why the holders of railroad securities should be robbed of their investment than there is why the buyers of land along these lines should be robbed of the advance in value between the original purchase price and the present price of their land. Men bought land by the thousands of acres for \$1 or \$2 an acre long in advance of railroad construction. With the coming of the railroads these lands were doubled and trebled and quadrupled in value. The railroad was the factor which created this greater prosperity for the landowner. If the railroad owner is to be robbed of his property, why not at the same time rob the landowner? Why not compel the landowner, and in the aggregate all landowners who say that they cannot live under present freight rates, to throw their land on the market or to sell it at the prices which once prevailed? The landowner is no more entitled to protection against robbery than is the railroad owner.

In former years railroad freight rates were entirely too low. The MANUFACTURERS RECORD took this position many years ago, long before we had ever heard such a suggestion made by any railroad man. In a study of the indebtedness and of the fact that railroads never earned enough with which to retire their bonds, the MANUFACTURERS RECORD pointed out that any business which was not earning enough to gradually retire its bonded indebtedness was not on a thoroughly sound economic basis.

Our freight rates were far below those prevailing in Europe. Our railroads were not earning sufficient money at the rates prevailing to build up a reserve fund to carry them through bad times and to pay for the extensions which were from time to time needed. But under a false idea of cheapness railroad rates, freight and passenger, were put at a point which did not yield a profit sufficient to accomplish this.

The people permitted the cowardly surrender in 1916 of the Government to the railroad brotherhoods, the most cowardly surrender ever made by this Government to any interest or organization. In doing this they added billions of dollars to the operating expenses of the railroads. Had it not been for this condition the railroads would today be able to operate at very much lower freight rates and give very much better service. Instead of seeking to rob the railroads or the security-holders of their possessions, it would be very much better for Mr. Jordan and all others who think as he does, if there are any others thinking that way, to recognize that it was the Adamson Bill and the Government's cowardly surrender to the brotherhoods which placed the railroads in the present situation.

Moreover, when the Government took over the management of the railroads, it enormously increased the expenses of operation. It added hundreds of thousands of unnecessary employees. It burdened the roads with obligations which have well-nigh broken the back of all of them. The people are, in a broad sense, the Government. The people, therefore, piled on the railroads these burdens which it is not possible to bear. If the people through the Government will again give the railroads the opportunity of managing their own affairs



by the repeal of the Adamson Bill, it will be entirely feasible for the railroads to reduce their freight rates and give better service.

When Secretary McAdoo took over the management of the railroads, he promised that he would be able to run them more efficiently and without any increase in freight rates. A more absurd promise was never made. Scarcely had he taken the railroads into his possession before he heavily increased the freight rates, added on thousands of unnecessary employes and loaded the railroads with expenses which have well-nigh exhausted them. The Government contracted to maintain the standard then existing of railroad rolling stock and roadbed. On this point it fell so far short that probably a good many of the railroads of the country will have to sue the Government in order to recover some portion of the hundreds of millions of depreciation never covered by railroad betterment.

When Secretary McAdoo saw that every promise that he had made in regard to railroad efficiency would utterly fail, and that the railroads were becoming bankrupt under his management, he stepped from under and got out of the job, hoping, we presume, thereby to avoid catching the full blame for the failure of all of his promises and all of his management.

During the war the Government commandeered the railroads and managed them to suit itself. It bankrupted them financially and physically. They are still suffering from these burdens, and the blame for high rates and inadequate service should not be placed upon the railroads, but upon the Government.

Moreover, any suggestion such as that made by Mr. Jordan of destroying all railroad securities by forcing railroads to be sold out under the conditions named by him would bankrupt a very large proportion of the insurance companies of the country, upon whose safety depends the future of millions of widows and orphans. It would bankrupt a very large proportion of the savings banks of the country, and would bring poverty to security-holders, among whom widows and orphans are numbered by the tens of thousands. Railroad securities are largely held by savings banks, by insurance companies and by widows and orphans, and the savings banks and the insurance companies are the safeguard for the welfare of millions of beneficiaries. Mr. Jordan would propose that all of these people be made to suffer because, burdened as the railroads now are with Government inefficiency legacy and the high cost of labor forced on the railroads by the Government, they cannot live under low rates of freight.

We publish Mr. Jordan's letter merely to show how some people who think that they think have no more conception of the problems connected with railroad management or with the honesty of business dealing by the country, honestly dealing with business interests of all kinds, than Germany has of honor. We have not the slightest doubt that Mr. Jordan in studying out this problem thought that he had reached an honest solution, and we publish his letter on that ground, and for the purpose of showing how many misguided people are trying to mislead others.

## HUGE BRIDGE PLANNED FOR HUDSON RIVER.

THE long-discussed idea of constructing a bridge across the Hudson River at New York has assumed concrete form by the incorporation of the Hudson Bridge Corporation at Albany, N. Y., with \$251,000 capital stock, but it is estimated that the bridge plan in its entirety will involve expenditures totaling \$200,000,000. The bridge is to carry railroad tracks, as well as highways for automobiles and other vehicles, and also walkways for foot passengers, which may include moving sidewalks. Besides, there will be freight and passenger terminals and elevated railways connected therewith.

At Manhattan Island the Hudson River is about three-

quarters of a mile wide, and being a deep tidal stream, with commerce from all countries of the world, besides constant ferry service active upon it, the construction of a bridge large enough and high enough to meet all requirements presents stupendous engineering difficulties. Moreover, the sums of money to be invested in an enterprise of this nature would necessarily be so vast that the most careful preliminary study must be given to the plans and to the probable yield which tolls for the use of the bridge can be relied upon to produce without making this tax too burdensome. Or, if the idea is to make a free bridge, the financial load must not be beyond the ability of the annual State or city budget to carry.

Of the need for such a bridge there can be no question. There is only one bridge across the Hudson between New York and Albany, and that is the Poughkeepsie bridge, which is only for railroad traffic. There are tunnels at New York city, it is true, but they do not afford such abundant advantages as could be extended by a bridge, for they offer only partial relief to the needs of congested traffic, and vehicles, other than railroad cars, are obliged to cross the Hudson by means of the ferries, which are comparatively slow, besides being subject to the dangers and hindrances of fog and ice.

A general idea of the magnitude of the proposed Hudson River bridge is possible if it will be remembered that the width of the East River, where the bridges cross, is only about a quarter of a mile wide, while the width of the North or Hudson River is three times as great. The main span of the Brooklyn bridge is very nearly 1600 feet (1595½ feet, to be exact), and the main span of the Williamsburg bridge, the next one built, is an even 1600 feet long. They are about 135 feet above the surface of the water in midstream, and as to length, the Brooklyn bridge is slightly more than a mile and an eighth from end to end and the Williamsburg bridge is almost a mile and two-fifths between terminals. Probably the Hudson River bridge would have to be between two and two and a half miles in extreme length, and the main span would have to be much larger than those of the East River bridges, even if piers are set out in the stream not far from each shore.

It does not, however, appear decided that the proposed bridge is to be of the suspension type, although this kind of bridge has been much more extensively employed in the United States than in other countries. The great bridge over the St. Lawrence River at Quebec is of the cantilever type, with a main span of 1800 feet, and another huge cantilever is that over the Frith of Forth, in Scotland, which has two main spans of 1710 feet each. These massive structures, while not possessing the attractive appearance of suspension bridges, are nevertheless approved by many engineers for their distinctive qualities, and a number of bridges of the same type have been constructed not only in this country, but abroad.

Assuming that the necessary financial forces can be enlisted in support of this proposed important enterprise, it could not be begun at a better time than now, when public favor has turned strongly toward securities issued for the prosecution of public works and when conditions are much more favorable than they were for obtaining the large labor forces essential for the execution of great engineering plans. The needs of the traffic situation between New York city and New Jersey are vast. Already it is recognized that the several cities around the mouth of the Hudson constitute in their comprehensive entirety the largest municipality in the world, even London being distanced already. These pressing factors foreshadow the tremendous demands that the next few years will make upon the existing facilities and show beyond doubt that a bridge will have to be built or else there must ensue traffic congestions to cause loss and business suffering of unprecedented extent.



## HOW LONG WILL PRODUCERS, FARMERS AND MANUFACTURERS PERMIT THIS SPIRIT TO PREVAIL?

A YEAR ago one of the leading officials of the Federal Banking System, in a letter to the MANUFACTURERS RECORD protesting against our criticism of deflation, called attention to an article which had been written by Mr. George E. Roberts, vice-president of the National City Bank of New York, and expressed his feeling by saying he regarded Mr. Roberts as "the soundest practical economist in the country with whose writings I am familiar." In the same letter it was said: "The South now is fast coming into the kingdom of wealth which your journal has always predicted for it and endeavored to promote."

That kingdom of wealth does not exist in the South today because the Federal Reserve Board followed the teachings of Mr. Roberts, so strongly commended by this official of the Federal Reserve Board.

In reply to that letter the writer emphasized as strongly as he could the fact that he did not accept Mr. Roberts' views as those of the "soundest practical economist in the country." He took emphatic issue with every point made by Mr. Roberts, and every point we made in that reply has been fulfilled.

These facts are mentioned in connection with an article recently issued by Mr. Roberts entitled "Present Price and Credit Situation Points Way to Normal Times." In that article, as quoted by Mr. George W. Armstrong in his interesting letter published last week, Mr. Roberts said: "Practically all authorities upon monetary science agree that an increase of the money in circulation, or of bank credit circulating as money, will have of itself the effect of raising prices." That statement is entirely true, but there is nothing new to it. It is a fact well known to every man at all informed, but it is interesting to quote this from Mr. Roberts, who was so highly commended by a leading member of the Federal Banking System, because it merely serves to emphasize the fact that in following Mr. Roberts' teachings the Federal Reserve Board, in breaking down banking credit and decreasing circulation, has brought on the present business chaos.

People who follow Mr. Roberts' teachings are constantly speaking of the necessity of getting back to "normal times," and these normal times are, from their point of view, the times which are now prevailing. But no one but those who love deflation for deflation's sake, and for the power which this deflation gives to the international bankers of the world and the bondholders, wants any more of the present so-called normal times. Mr. Roberts speaks in the terms of the bondholder, and he says that if the recent high prices had continued to prevail "it would have worked a grave injustice to many thousands of people, because the value of all money and all obligations to pay fixed sums of money would be depreciated approximately one-half." "It would mean," said he, "that the retired farmer or business man who has converted his property into bonds or mortgages would find the interest as he received it, and the principal when it was paid back, approximately one-half of the purchasing power that he bargained for, and that he thought he possessed." That statement voices the whole spirit which has controlled the banking power of the world in its campaign for deflation. It has sought to increase the value of money as expressed in bonds, or in other forms of indebtedness, and in saying this Mr. Roberts speaks of thousands who would suffer from any permanent increase in price levels, but he utterly ignores the millions who are being impoverished by the decrease in prices. The farmers and all laborers are, according to this cruel policy, to have their incomes cut in half in order that the retired man or bondholder may have his interest and his principal doubled in value.

This false policy entirely ignores the fact that the war was fought on inflated prices and that our bonds were issued on inflated high wages and high prices of farm products. Expressed in productive power of the farm or the factory, it would take twice as many bales of cotton at 15 cents a pound to pay the bonded indebtedness which was incurred with cotton at 30 cents; twice as many bushels of wheat at the present price as compared with the price prevailing during the war when the bonds were issued. This burden of indebtedness, therefore, means that the cotton grower, the wheat grower and the cattle raiser and the wage-earner must work twice as many years, roughly stated, to pay the nation's bonded indebtedness as they would have worked under the conditions prevailing when the bonds were issued.

**Disguise it as the members of the Federal Reserve Board may seek to do, camouflage it by every possible bit of chicanery as the Board and the great bankers may seek to do, backed by the co-operation of the so-called political economists in the universities of the country, the scheme is one which can scarcely be classed as less than that of highway robbery.**

The official of the Federal Banking System, whose letter we have quoted saying "The South is now fast coming into a kingdom of wealth which your journal has always predicted for it and endeavored to promote," is in such close touch with the Southern situation that he knows that the coming of the kingdom of wealth has been postponed for some years to come. He knows that instead of the kingdom of wealth which he predicted was at hand there has been, through his work and that of his associates, created in the South a kingdom of poverty in place of a kingdom of wealth, and not alone in the South, for other sections are suffering even more than the South. The cattle raisers, the corn and wheat growers, the potato raisers of other sections, are all suffering as keenly as are Southern cotton growers. A kingdom of poverty, wide sweeping in its power for evil, has been created, where a year ago there was a kingdom of abounding wealth throughout the country.

Every effort which members of the Federal Board and their associates put forth to deny these facts only serves to show, whenever studied intelligently, that their denials are absolutely without foundation in fact.

## AN EMINENT MINISTER'S VIEW ON THE GERMAN AND THE WORLD SITUATION.

REV. O. C. S. WALLACE, now of Montreal, who spent a considerable portion of his life in this country, is one of the most profound students of world conditions and world events which it has ever been the writer's privilege to know. Dr. Wallace is widely known and esteemed throughout New England, where for many years he was an active pastor, and in all parts of the South, with the religious work of which he was for five or six years intimately identified.

These facts are mentioned in order to give additional weight to what he says in the following letter. Immediately upon reading the remarkable article in the MANUFACTURERS RECORD of February 10, by Mr. Ben. K. Raleigh, on the war preparations which Germany is making, Dr. Wallace wrote:

Montreal, February 14.

Editor Manufacturers Record:

When I read Ben. K. Raleigh's illuminating and startling letter in the MANUFACTURERS RECORD of February 10 I was interested rather than surprised.

The surprising thing is that we should be surprised at these comprehensive German plans for capturing the markets of the world. As I read Mr. Raleigh's letter, I remembered a story told me one day on the golf links, some years ago, by the manager of one of the great industries which were of supreme importance during the war. He told me in some detail why—

he was talking of pre-war conditions—the Germans often secured orders in competition with his company because of the greater thoroughness and far-sightedness of their methods. He had come to look upon the German Government as a great business enterprise, with agents in every country in which large things could be done in industries of the larger kind, and especially in those industries which would become supremely important in the event of war. My friend remarked in particular:

"We have difficulty in placing orders in Russia because of the advantage Germany has by reason of her methods. Germany sends bright young men into Russia to learn the Russian language and to secure positions in banks. These young men gather information concerning business firms which they remit to Berlin, where it is tabulated and made ready for instant reference. If an order is received by one of my firm's German competitors, the German firm can learn instantly whether the Russian firm placing the order is financially trustworthy, by referring to this tabulated, up-to-date information. On the other hand, when my firm receives a similar order, before accepting it we must, in many instances, spend many days in cabling to Russia for information which the Germans have in advance."

This astuteness was not censured by my friend; but when the war broke out it became at once apparent that what had seemed to be only business thoroughness could be turned to sinister uses.

I call attention, also, to the cover editorial of the MANUFACTURERS RECORD of February 10. With such a menace existing as you therein point out, or with the menace of a mighty and militant bolshevism, what force is there in the arguments of those who urge disarmament upon the United States and Great Britain? It is quite within the range of possibility that before another 50 years have passed the nations of the earth shall have lapsed into barbarism, unless America and Britain, by reason of their unity and preparedness, have been able to conquer and control the forces of a predatory and conscienceless tyranny, emerging for world-conquest from Northern Europe or—may this also be possible?—from Northern or Central Asia.

O. C. S. WALLACE.

### HENRY GEORGE ON LABOR UNIONS.

**H**ENRY GEORGE has always been accounted a great friend of the laboring man, and he was, but Henry George fully appreciated how tremendously the laboring man has been handicapped by labor unions. In reply to an encyclical letter from Pope Leo XIII on the condition of labor, Mr. George wrote as follows:

"For labor associations can do nothing to raise wages but by force. It may be force applied passively, or force applied actively, or force held in reserve, but it must be force. They must coerce those among their own members disposed to straggle, they must do their best to get into their hands the whole field of labor they seek to occupy and to force other workmen either to join them or to starve. Those who tell you of trades unions bent on raising wages by moral suasion alone are like those who would tell you of tigers who live on oranges."

"I speak without prejudice against trades unions, of which for years I was an active member. And in pointing out to your Holiness that their principle is selfish and incapable of large and permanent benefits, and that their methods violate natural rights and work hardship and injustice, I am only saying to you what, both in my books and by word of mouth, I have said over and over again to them. Nor is what I say capable of dispute. Intelligent trades-unionists know it, and the less intelligent vaguely feel it."

The statements which we have quoted from Mr. George's letter are known to all intelligent men to be entirely true. The operation of labor unions is, as he so clearly stated, selfish, in that these unions specifically seek to destroy the opportunity to secure work of all men who are not in the unions. These unions are for the exclusive benefit of their own members, and they do all in their power to destroy the ability of non-union people to secure employment. Indeed, they carry their hatred of non-union men to such an extent that union labor is often responsible for murder and many other crimes, seeking to advance its own interests at the expense of others.

Mr. George was entirely right in saying that intelligent trades-union men know this situation fully and that the less intelligent vaguely feel it. But the good, intelligent men permit themselves to be controlled by radicalism, and while they are not guilty of maltreating and murdering non-union men, they do stand aside and make no endeavor to suppress the unintelligent and vicious members of the unions from committing these crimes. Essentially, as Mr. George so clearly put in his letter to the Pope, trades-unionism is founded on selfishness, and to this might be added that it lives by criminality, utilizing for its own benefit the criminal instincts of all the evil men connected with labor unions.

It has always been an amazing thing that intelligent, honest, thoughtful labor-union men will permit themselves to be used and worked by radical leaders to break down the possibility of other men finding employment, and of murdering them if they think it necessary to do so, in order to carry out the behests of radical labor leaders.

### DAWES' PROFANITY AN OFFENSE TO THE NATION.

**C**OMMENTING on the wild burst of profanity of Charles G. Dawes before a congressional committee, which should have been suppressed by the committee as an indecent exposure of lack of sense, the Boston Transcript says:

"If," said Charles G. Dawes, at Washington, 'I wasn't strutting around here and swearing, there would be no news in this.' He was right. Some of the papers reported his profanity and nothing else. \* \* \* No doubt we all ought to take off our hats to the judicious and skillful swearer. The art has long supplied a convenient substitute for evidence, for logic, for conviction. All these functions, or attributes, are more or less bothersome abstractions and obstructions. It takes time and attention to master their significance, but a few prime cuss-words walk straight over the inert bodies of evidence and logic, and in their wake walks the delighted multitude. There should be professors of applied profanity in our universities."

Profanity has always, by intelligent people, been regarded as an evidence of a lack of ability to express one's self in simple language which would carry conviction. Profanity of the kind indulged in by Charles G. Dawes proved that whatever he may or may not have done in life, he has at least made himself a fine associate of a swearing mule-driver and disgraced the nation which he has been serving. This country does not need, in official life, men who have so little sense of dignity and responsibility that they must make a complete exposure of their incapacity and lack of intelligence by filling the land with their oaths.

When Charles G. Dawes referred to himself as "strutting around here and swearing," he made it quite certain to all morally-minded American men and women that his appointment to any political office in the future would seriously reflect upon the man who gave him the appointment. We profoundly hope, for the honor of the nation, that President-elect Harding will not appoint Mr. Dawes to any of the various offices for which his name has been suggested.

### Preliminary Steps in Campaign to Raise \$5,000,000 for Georgia School of Technology.

Atlanta, Ga., February 18.—[Special.]—The \$5,000,000 campaign for a Greater Georgia Tech., to be waged from April 20 to April 30, is already under way with the appointment and acceptance of Victor H. Allen of Buford, Ga., as chairman of the executive committee and by the formation in New York of a committee pledged to raise \$1,000,000 of the fund in New York city and the North. The cotton manufacturers of Georgia have approved a resolution that the members of their association contribute \$500,000, so a great start has been actually made toward the fund.

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# Former British Chancellor of the Exchequer Declares That Monetary Deflation Must Lead to Disaster

[Reginald McKenna, formerly Chancellor of the Exchequer and now chairman of the London Joint City and Midland Bank, Limited, one of the foremost financiers of England and of the world, in his annual report to shareholders, discussed the issue of deflation. A brief summary of his position was cabled to America. We print below a large part of the report because it so clearly and convincingly reveals the ruinous effect which deflation is certain to have, and because also it reveals the grave error involved in employing deflation as an economic remedy at this time, on the theory that the object is to terminate a period of speculation, whereas, in truth, the so-called inflation is of an entirely different sort and kind, and not to be cured by expedients likely to be successful under ordinary conditions. Mr. McKenna says that gradual deflation under present conditions is "a policy impossible of execution." It cannot be controlled, but if started must become precipitate.]

That Mr. McKenna is right is proved by the fact that Governor Harding of the Federal Reserve Board has confessed that his Board lost control of the situation in September. The dictatorial power of the Federal Reserve Board over the banks has prevented a free expression of opinion in America as to its policy, and a concerted effort has been made to have it appear that all opposing drastic deflation are theorists and ignorant persons. The truth is, of course, that the foremost economists and financiers of the world are entirely convinced that deflation as it has been practiced in the United States menaces the stability of the world's economic structure, and is likely to throw the whole world into bankruptcy. Mr. McKenna shows in cold figures that deflation, if accomplished, would raise the tax levy in England to "a rate absolutely impossible for any country to bear." It has already accomplished that result in America, since many important companies have been compelled to borrow money with which to pay taxes. The Comptroller of the Currency estimates that there has been a melting-away of values of from 12 to 18 billions of dollars in farm, factory and mine products in the United States alone as a result of deflation in one year.—Editor Manufacturers Record.]

By RIGHT HON. REGINALD MCKENNA, Chairman London Joint City and Midland Bank, Ltd.

In dealing with inflation of the kind with which we are confronted now, dear money and a rigid restriction of credit, so far from proving an effective means of restoring trade to a wholesome condition, can only aggravate our evils. Both sets of causes inducing inflation may be present at the same time, and when this is the case a policy of dear money may be choice of the less of two evils; but it must never be left out of sight that the inflation, which I call speculative inflation, is necessarily only temporary, whereas the inflation which, to distinguish it in its causes from the other, I will call monetary inflation, must be regarded as more or less permanent.

## Borrowing for Consumption.

In considering monetary inflation it is necessary to ask you to recall the distinction already made between the different kinds of bank advances. So far I have been speaking of the effect of loans made or purporting to be made for some object of trade or manufacture. The second category of bank loans consists of those made in order to enable the borrower to buy commodities for the purpose of consumption. Goods bought to be consumed are not ordinarily paid for out of an advance by a bank. It may happen now and then that banks make loans for this purpose, but they would be trivial in amount and are not worth considering in the general view of banking transactions. The power to borrow for the purpose of consumption would be strictly limited by the willingness of the bank to lend.

## Monetary Inflation.

There is, however, one case of borrowing for consumption with regard to which there is no such limitation. The inevitable borrowing by the Government during the war, borrowing on a gigantic scale and almost entirely for consumption, compels us to direct our attention to the consequences of this class of loan. The total amount raised in this country for the purpose of the war was about £5,800,000,000, part lent by the public and part by the banks. In my address to you last year I endeavored to show that the chain of events this borrowing was the primary cause of the post inflation which took place. As the loans remained outstanding after the commodities bought had been consumed, we reached the condition of inflation, an immense increase of purchasing power relative to the amount of commodities available for purchase.

It is worth observing that monetary inflation is inevitable in a great war. It is theoretically conceivable that the public might pick up the whole of the war loans issued and find the money exclusively by saving from their ordinary expenditure. There would then be no need to borrow from the banks, there would be no inflation and no rise in prices. But in practice, when dealing with the gigantic amounts which have to be borrowed, such a con-

dition of things is impossible. The Government was forced to have recourse to the banks, and the loans were followed by a rise in prices, the issue of more and more currency and all the accompaniments of inflation.

## Proposed Policy of Deflation Impracticable.

Monetary inflation, unlike speculative inflation, is not a temporary condition capable of remedy by raising the bank rate and restricting credit. Prices in this case are forced up over a protracted period of time, wages and contracts of all kinds are adjusted to new price levels, and fresh capital is embarked in business on this basis. In circumstances such as these the first effect of an attempt to force down prices by monetary deflation must be to cause severe trade depression. A declared policy of monetary deflation is a public warning to the trader that he must be prepared to lose on every contract for the future delivery of goods. Owing to the general fall in prices, the market price of the goods when he gets them will be lower than at the time when his contract was made. A policy of gradual monetary deflation, but deflation so guarded as not to interfere with production, is a policy impossible of execution. Trade is never good when prices are declining, but the consequence of a continuous fall in prices entailed by dear money and restriction of credit, and accentuated by heavy taxation, must be complete stagnation of business. We have to recognize the fact that trade is carried on for profit, and if business men know that loss is inevitable they will restrict their activities to the utmost.

## Effect of Proposed Monetary Deflation.

The first effect, then, of an attempt at monetary deflation of this kind will be to arrest business. A fall in wholesale prices will follow, due to goods being thrown upon the market by traders who are unable to carry their stocks or have failed in business. There will be a diminution in production, profits will be greatly lessened, and unemployment will grow. This will, in turn lead to reduced power on the part of wage-earners to spend on consumption and to a further fall in both wholesale and retail prices. Yet the consequences here described can only be the first effects of monetary deflation. The volume of purchasing power brought into existence as a result of the immense war loans will not have been diminished and it may be expected that this purchasing power will be freely exercised as soon as it is believed that prices have touched bottom. A heavy drop in prices, therefore, can only be temporary.

There is, indeed, reason to think that a further period of inflation will follow. In consequence of the trade depression there will be a great decline in national revenue without any diminution of the permanent liabilities of the Government, who will be obliged to increase taxation or to borrow. In the present overburdened



condition of the country, however, new taxes can only be met by traders borrowing from their banks, and it will follow that, whether by the Government or by the taxpayers, recourse will be made to bank loans, and credit inflation will ensue.

#### How Monetary Deflation Can Be Accomplished.

If permanent monetary deflation is to be accomplished, it can only be by a reduction of the purchasing power brought into existence by the great war loans, a reduction which can only be effected by paying off part of the national debt. But there is no means of doing this by the imposition of additional taxation, as suggested in the Treasury memorandums, without bringing immediate ruin upon our commerce and manufacture. I do not want to discuss here the evils of overtaxation, but our experience during the last year has taught us that there is a limit beyond which trade and industry cannot be burdened without grave danger to their strength and permanence. That limit is passed when traders are forced to borrow from their banks in order to meet their liabilities to the tax collector, and it is a fact that no inconsiderable part of the expansion of credit during the year which has just elapsed was due to this cause. In present circumstances, the only source from which funds can be obtained for repayment of the national debt is by economy in expenditure, and by this means alone can monetary deflation be effected, or even attempted, without permanent injury to our trade.

#### Effect of Proposed Deflation on Government Liabilities.

Let us look at the policy of monetary deflation, to be obtained by a high bank rate and a restriction of credit, from another point of view. Let us suppose that it were practicable by this process to bring prices permanently down to the pre-war level. What sort of charge would our national debt then mean to us? It stands today at £7,770,000,000, mostly borrowed when money was worth very much less than before the war. With prices back to their former level, the true burden of the debt would be more than doubled, or, in other words, the creditor would receive a huge premium at the expense of the debtor. But let us disregard this fact, so repugnant to every principle of equity and economic propriety, and let us suppose our object accomplished and prices brought back to the 1914 level. The aggregate of our individual incomes and the revenue from taxation would be correspondingly diminished. A penny in the pound of income tax would produce, as it did before the war, about £3,000,000. Economize our national expenditure as we would, we could not escape from the annual charge for interest on the national debt and unavoidable sinking fund, which would be not less than £350,000,000. The charge for war pensions, £120,000,000, is also irreducible. These two heads of expenditure alone give a total of £470,000,000, which if we left the whole of the remaining cost of government to be defrayed out of our other revenue, would call for an income tax of over 13s. in the pound, a rate absolutely impossible for any country to bear.

I think I have said enough to show that an attempt at monetary deflation of this kind can only end in the strangulation of business and widespread unemployment. I have shown next that this kind of deflation cannot be effected at all unless the cause which produced the inflation is removed; that is to say, unless part of the immense Government loans is repaid, and that there is no means of doing this except by economy in expenditure. We need to stabilize prices, and when inflation is due to temporary causes we must not only check it, but force deflation until the former price level is restored. Any premature attempt, however, at monetary deflation by methods which do not touch the causes that have produced the inflation must lead to disaster. Great unemployment will ensue, and the nation will be faced with social evils of a different kind, though not less serious, than those resulting from inflation.

#### How Deflation Can Be Effected.

At the risk of repeating myself, I must remind you that I have been referring in all I have said to monetary deflation of a particular kind, the reduction of purchasing power, brought into existence through war borrowing, by the several methods of heavy taxation, restriction of credit and dear money rates. It must not be overlooked, however, that deflation can be obtained in another way. If we increase the commodities available for purchase without any increase of purchasing power, we shall deflate and prices will fall. Deflation of this kind can be effected without producing

the evils to which I have just referred. The fall in prices will be very gradual, and though a less rate of profit will be made than if prices were stable, it will be on a larger quantity, and there can still be room for a fair return on capital and a fair reward for labor. This is the kind of deflation at which we ought to aim—a deflation which will be brought about by a larger supply of the commodities we all need, a greater surplus for foreign export and a larger total of real wealth. This is the deflation which actually took place during the nineteenth century after the Napoleonic Wars. For over thirty years prices fell, not through an artificial limitation of credit and a restriction of business, but by an immense addition to output, which the great industrial inventions of that century rendered possible.

#### Urge Protection of American Dye Industry.

New York, February 16—[Special.]—Protection of the dye industry was urged by the National Civic Federation at its meeting here this week. A resolution was adopted calling on Congress to pass at once the Longworth bill, as amended by the Senate Finance Committee, as follows:

"Whereas the development of chemical science has shown that dyes are closely allied in composition to explosives and poison gases, and that the manufacture of the former can readily be adapted to that of the latter, and

"Whereas it is apparent that the possession of a complete and self-sustaining organic chemical industry is in itself a formidable armament to any nation, and

"Whereas the existence of this industry also insures the independence of a large part of our national manufactures, the realization of the possibilities of scientific advance in industry and the continuance of the marvelous accomplishments of chemical medicine, and

"Whereas the United States now has, as a result of a supreme effort during the war, an industry for making dyes which is also capable of supplying promptly all the necessities of chemical warfare, both for attack and defense, and

"Whereas our organic chemical industry now faces the certainty of destructive attack from the former German world monopoly, aided by superior experience, lower costs, depreciated exchange and unscrupulous methods, which attack cannot be sustained without some extreme form of temporary protection; now, therefore, be it

"Resolved, That the National Civic Federation urges as a measure indispensable both to the national defense and to the hope of world disarmament the immediate enactment by the Senate of the United States of the Longworth Bill, H. R. 8078, as amended by the Senate Finance Committee."

#### Fiber Containers for Packing Orange and Grapefruit to Cut Cost 50 Per Cent to Consumer.

Florida oranges and grapefruit may soon be had by the consumer in sealed fiber containers carrying one, two or three dozen to the package, at a cost, it is claimed, of 50 per cent less than under the old system. The first packing-house in the State to introduce the new method is the Florence Villa Growers' Exchange, Florence Villa, Fla., which is using the fiber containers manufactured especially for the citrus trade by the Philadelphia Paper Manufacturing Co. of Philadelphia. The Exchange plans to precool, pack and ship its fruit in individual packages, reaching the consumers through the chain stores of the country.

Among the advantages claimed for this new method is the high quality of the fruit because of precooling, less cost to the consumer, and as it is in small units of from one to two and three dozen to the package, will be more attractive to the buying public and tend to cause the sale of oranges and grapefruit by the dozen rather than by smaller quantities.

It is stated that the fiber boxes can be manufactured or assembled at the packing-house, and that other packing interests in the State are considering the adoption of the individual package, which some believe will revolutionize the citrus-fruit industry in the State, since the price of wooden boxes has been soaring of recent years because of the growing shortage in the lumber supply. The use of fiber boxes in replacing other materials for containers of every sort has grown by leaps and bounds in recent years.



# Restriction and Regulation of Immigration

## Essential to Continued National Well-Being

WITH 17,000,000 ALIENS ALREADY HERE, LIMIT OF ASSIMILABILITY HAS BEEN REACHED—  
AMERICAN IDEALS AND STANDARDS OF LIVING ALREADY IMPERILED—MOMENTOUS  
PROBLEMS PRESS FOR IMMEDIATE SOLUTION.

[Colonel Sweeney of the United States Army has had an unusual opportunity for observing conditions and standards of civilization that prevail in various parts of the world, and his conclusions herewith that America will be imperiled by continued indiscriminate immigration, are entitled to most serious consideration. A native of Wheeling, W. Va., he enlisted as a private in the Spanish-American War, and after service in that conflict was advanced to second lieutenant in the regular army, receiving his commission June 1, 1899. He has been in continuous service since then as an officer of infantry in the regular army, arriving at the grade of lieutenant-colonel July 1, 1920. At present he is attached to headquarters First Corps Area, Boston. His war service besides the Spanish-American War includes the Philippine insurrection, the Mexican campaign and the World War. Arriving in France in July, 1917, he was on General Pershing's Staff as Chief of the Censorship Division of the General Staff. From July, 1918, to the armistice he was at the front, participating in the St. Mihiel operations, the Argonne campaign and the operations opposite Metz. A Distinguished Service Medal, a citation from General Pershing and an award by the French Government of the Legion of Honor were decorations received for distinguished services and exceptionally meritorious conduct in the Argonne campaign.]

Colonel Sweeney has seen the people of the Old World in their every-day lives; he knows their ideals and their standards of living. He has also thoroughly traveled the United States. He is a deep student of affairs and a zealous patriot. His article herewith is a thought-compelling presentation of a most vital question.—Editor Manufacturers Record.]

By LIEUT.-COL. WALTER C. SWEENEY, United States Army.

What will the United States be in 50 or in 100 years from now? Will it still be a nation of one people, or will it be an aggregation of peoples?

Will Wisconsin be a new Germany? Minnesota an offshoot of Scandinavia? Chicago another Poland? Boston a second Italy? New York a combination of Central Europe and Palestine? And, will the rest of the country be divided up in a similar way?

Will hordes of emigrants be leaving the United States, as they are leaving Europe today, hunting for new homes and better living conditions? Will the standard of living in the United States be as low as that of Central Europe today?

Or, will we have waked up by that time and have taken the necessary measures to safeguard our nation?

Will we, as a nation, plan our future life as the wise individual and the efficient business concerns plan for the future? Or will we still settle vital questions according to expediency and the demands of the present?

We must look out for our future welfare now and at all times as jealously as we did when we proclaimed the Monroe Doctrine and as vigorously as we did when we fought the Civil War.

No other nation will look out for our interests. We must plan to have the United States live as long as possible, and we must insure that our people shall maintain the highest possible standard of living.

Nations rise and fall. Governments change their form. Nations disintegrate because their people lose that community of interest and that common ideal which are necessary to national life. The United States is subject to these inexorable laws the same as any other nation.

### Our Situation Today.

The gravity of the present world situation and the resulting dangers to this nation are not realized by our people. It is not fair to say that the public is blind or that it is wholly indifferent, because there are signs that the situation is at least partly appreciated. There are many local patriotic clubs and societies all over the country which are committed to upholding constitutional government and to maintaining the traditions of the nation. But they get nowhere, because there is no single directing and controlling head for their activities. They do not have definite objectives, and as a consequence their attitude is defensive. The initiative is on the side of those who would destroy the nation.

The communists and their followers are under one central control. They conform to fixed policies in their insidious work. Their agitators and publications openly threaten to change our form of government. Radical aliens, and even anarchists, escape deportation and continue their activities. American citizens of outspoken anarchistic tendencies go unpunished.

From war-ridden, poverty-stricken Europe are to come millions

of immigrants to divide our country with us and to get a share of its wealth.

While all this takes place the great American public goes about its business and does nothing. It hears treasonable talk. It reads treasonable sentiment. It pays no attention. It is high time to speculate upon the possible effect of this whole general situation upon the life of the nation.

Any domestic question of today may be equally as important in its influence upon our future national life as was the question which was settled by the Civil War. It is, therefore, of the greatest importance that all such questions be thoroughly examined in all of their aspects and the results set forth for the information of the public, which is finally responsible for preserving the nation.

Immigration and radicalism are two important questions which are pressing for immediate settlement. The development of radicalism or communism is partially due to immigration, because of the foreign influences which come with it. It will not be difficult to deal with radicalism if the immigration problem is properly solved and if the public wakes up to the danger.

The essence of the public discussion concerning immigration is that capital wants cheap labor and labor does not want this competition; that if we let these low-class people into our country they may bring epidemics and diseases, but if we do not take them in we will fail to do our duty by humanity. If these were the only considerations, the solution would be easy.

The real dangers, however, are (1) if we overpopulate our country we will have too many mouths to feed on our resources and will be forced to lower our standard of living, and (2) if we take in foreigners at a more rapid rate than that at which we can assimilate them, we will introduce elements which will ultimately disintegrate and destroy our national unity.

### What Makes a Nation.

Before discussing the effects of immigration, let us first fix clearly in mind what a nation is, what its national aims are and what course of life a nation ordinarily follows.

A nation is described as:

Any group or aggregation of people having like institutions and customs, and a sense of homogeneity and mutual interest.

A single language, a common religion, a common history and tradition, a common sense of right and wrong, and a more or less compact territory are typically characteristic.

The United States is a nation. Its people have all the attributes which a nation must possess, and, further, have every one of the typical characteristics which are mentioned.

The national aims of the United States are set forth in the Declaration of Independence and the Constitution and its amendments. In general the Government guarantees to its people the enjoyment of the inalienable rights of life, liberty and the pursuit

of happiness, and the protection and preservation of property and property rights. The United States has set up a standard of Christian civilization which is an example to the rest of the world. The maintenance of this standard must be accepted as an additional aim of our national life.

The history of nations shows that the life of a nation is ordinarily divided into two phases.

The first phase, its rise, includes its birth as a nation and its gradual development, through the passing years, to the highest point of its power and prosperity. During this phase the nation is characterized by its energy and activity in building itself up, by its virility, by its continual growth and expansion, by its steady progress and prosperity, and by its willingness to fight for its own rights. History shows that, in a republic, the first phase is always marked by the activity and interest of the citizens in their civic responsibilities and duties, and by their willingness to serve their country even at personal sacrifice.

The second phase, its fall, includes the period extending from the time when it is at its highest point of prosperity to the time when it begins to lose its community of interest, when its people neglect their duties to the nation for personal interests, when it becomes less prosperous, less progressive, begins to lose territory and gradually slips backward until it becomes a mere semblance of its former self and finally disappears as a nation.

We are not concerned with the second phase in the life of the United States, but it is well to note the signs which characterize it.

Many nations have started as republics. Not one has yet lived out its national life as such.

#### Effects of Immigration in the Past.

Immigration has played a very prominent part in the development of the United States. The policy which the United States has followed in the past has been to "let them in," and once the immigrant was in, to assimilate him and make a citizen out of him. It was a wise policy, and has been of inestimable value to the nation.

The United States since its birth has had a phenomenal rate of increase in population. This has been due largely to the great stream of immigrants which have been constantly flowing into it. A total of about 33,000,000 have come into the United States since 1820.

We have been able to take care of these people only because the available land and the natural and mineral resources within the borders of the United States have always been in excess of what was needed for the population.

As the immigrants arrived they scattered out into the country, took up homesteads or settled down to work in towns or cities without regard to the location of any of their own nationals. Wages were good, food was plentiful and life was not a very severe struggle. Soon they learned English and became naturalized citizens, sending their children to American schools and themselves growing to be active Americans, with a great love for their new country.

The distribution of immigrants has been the greatest contributing factor to the wonderful growth of the United States. Being distributed, they could be assimilated. There was no incentive for them to gather into racial groups. The incoming immigrant went into a melting pot from which he later emerged as a full citizen of his adopted country, proud of his new status and dependable for forwarding the country's interests even to the point of defending them with his life.

Remembering the things which have been mentioned as typical characteristics of a nation, it will be seen that there never could have been such a national growth and such a strongly united nation had there not always been more land and resources than our population required, and had those common attributes not been attained by the new citizens coming into the nation.

In the building of the United States, the part played by the foreign-born and their descendants has been most important. They have been a most valuable asset to the nation.

#### The Standard of Living.

The rapid absorption of the land and of its resources by the increasing population has brought into play certain economic forces or laws, which during the past 20 years have begun to have their effect. Heretofore these laws have not been given much consideration by the United States, but, as will be seen hereafter, they cannot be violated with impunity.

There is a definite relation existing between the number of acres per inhabitant in any country and the standard of living which it is possible for the inhabitants of that country to maintain. A sponge will take up just so much water. A given number of acres will support just so many inhabitants at a specified standard of living. When the inhabitants increase in numbers beyond a certain ratio, their standard of living will be lowered, because there will be less land to the individual, and the struggle to make the ground produce more, either in foodstuff or minerals, to compensate for this will make them all work harder and for longer hours. There will be less and less produced over and above that needed for maintaining existence, hence less time in which to do the things and less income with which to buy the things that tend to educate and civilize.

On the other hand, where the number of acres per inhabitant is increased there will be an excess over the needs for existence, which the inhabitants can convert into things of various sorts that tend to raise the standard of living. The individual will have more time in which to educate himself and his family; to indulge himself in the study of the sciences and arts; to attend church and to practice his religion. He will be able to travel and broaden his education. He will be sufficiently well off, perhaps, to contribute to charity, and thereby assist others less fortunate than himself; to own an automobile; to wear good clothes; to attend the theater and the movies, and to enjoy the good things of life. The degree to which the average individual can do these things marks the average standard of living maintained in his country.

There is no country in the world where the standard of living approaches that which is maintained in the United States. This is the principal reason why we have so many immigrants. People do not emigrate from a country having a high standard of living to one having a lower standard.

#### Ratio of Population to Acreage.

Under the present-day conditions of scientific management and development in agriculture and manufacture, and with modern facilities for getting products to markets, the ratio of inhabitants to acreage which will give the highest standard of living to the nation as a whole is much less than it was in years gone by. It will decrease still further as other similar factors affect it. In purely agricultural areas, or purely manufacturing areas, the ratio will not be the same. The natural resources of the country in arable land and mineral wealth, the form of government, the racial characteristics of the people, the ability to get the excess supplies to markets, improvement in agricultural tools, the introduction of machinery doing the work of many men, irrigation systems on a large scale, and many other factors will cause the ratio to vary in different countries.

The following tabulation shows the ratio of inhabitants to acreage at various periods in continental United States from 1790 to 1920:

Year.	Population. (In millions.)	Square miles. (In millions.)	Inhabitant to acres.
1790	3.92	.89	1 to 145
1810	7.24	1.79	1 to 153
1820	9.63	1.79	1 to 121
1850	23.19	2.96	1 to 85
1870	38.55	3.02	1 to 50
1900	75.99	3.02	1 to 25.6
1920	105.68	3.02	1 to 18.3

Notice how rapidly the population has increased from period to period, and each time what the effect was on the number of acres per inhabitant. Is our ratio now below that which is necessary to maintain the most desirable standard of living? How much lower can we afford to reduce it and still have a prosperous nation 50 or 100 years from now?

Here is another tabulation which is of interest. Its main purpose is to show the comparison between the United States and certain other nations in this respect:

Nation.	Population. (In millions.)	Square miles. (In millions.)	Ratio. Inhabitant to acre.
Great Britain (Proper), 1910.....	45.22	.12	1 to 1.7
British Empire, 1910.....	436.00	13.12	1 to 19.1
Germany (Europe), 1913.....	65.00	.20	1 to 2
Japan, 1910.....	75.50	.14	1 to 1.1
United States, 1920 (and all possessions).....	117.71	3.74	1 to 20
Continental United States.....	105.68	3.02	1 to 18.3

The difference in the number of acres per inhabitant between the United States and all its possessions and continental United States is due to the great stretches of acreage which are found in

Alaska, arable, Note and W itants. except that ab who ne of these British to that carrying Empire. Notice the 65, populat and liv rials. hence i nor the Look Britain ple. Educe fo parison what by Japanes forces i Histo land av that the which n them to the high The inhabitan answer problem exactly, determin guide in ber of a natural porting the pre We m to ourse Now, introdu our nati The f of the v mated t cent. T other co them an own peo United yet been Immig found a There h to be de hen ha Indus offered fore the cities, places a racial in News have pra ian nat instituti to make live und

Alaska. These, as we know, are largely uninhabitable and not arable, but may contain great mineral wealth.

Note Great Britain (proper, that is, England, Ireland, Scotland and Wales), with its 1.7 acres to each of its 45,000,000 inhabitants. They could not exist at their present standard of living except for the acreage provided by the British Empire. Calculate that about 65,000,000 of these inhabitants only are white people, who need a standard of living comparable to ours, and that most of these are in Great Britain, and then is seen the reason why the British Empire is so anxious to maintain a naval strength equal to that of any other two nations, and why it wants to control the carrying trade of the world. The above figures on the British Empire are pre-war.

Notice Germany. In 1913 there were only two acres to each of the 65,000,000 of inhabitants. It was able to support this great population because it turned itself into a manufacturing nation and lived on its principal, i. e., its mineral wealth of raw materials. Its colonies, however, were not subject to its sole control; hence it could not insure the necessary markets for its products nor the necessary acreage for its inhabitants.

Look at Japan, in a similar island position to that of Great Britain. She has only 1.1 acres to each of her 75,500,000 of people. Every available foot of land in Japan proper is made to produce food. The standard of living in Japan is very low in comparison with ours. She has recently relieved the situation somewhat by developing great manufacturing plants in Japan proper. Japanese activity to acquire more land is one of the disturbing forces in the world today.

History is repeating itself. Stronger nations have always taken land away from the weaker ones. There is no reason to believe that they will not continue to do so. The struggle for existence which nations are compelled to make, if they would survive, forces them to secure sufficient land to enable their nationals to maintain the highest possible standard of living.

The vital question for us now is to determine what the ratio of inhabitants to acreage should be for the United States. The answer to this question will at once point the way to solving the problem of immigration. The ratio cannot well be expressed exactly, because it will vary with the passing years, but it can be determined, within certain limits, from time to time to serve as a guide in framing our immigration laws. We have a certain number of arable acres containing a known amount of mineral and natural wealth. We must calculate how far it will go toward supporting our population, at an acceptable standard of living, for the present and for the future.

We must build for the future of our nation if we would be true to ourselves.

#### Effects of Immigration in Recent Years.

Now, as to the other danger, that is, the elements that are introduced by immigration which tend to disintegrate and destroy our national unity.

The foreign-born in our population in 1900 was 13½ per cent of the whole. In 1910 it was about 15 per cent, and it is estimated that the 1920 census will show an increase to about 17 per cent. That is, about 17,000,000 of our inhabitants were born in other countries. Most of them are good citizens, but many of them are accustomed to a lower standard of living than are our own people. About 6,000,000 of immigrants were admitted to the United States between 1910 and 1920. Many of these have not yet been assimilated.

Immigrants coming to the United States in recent years have found a different situation from that which formerly existed. There has been no desirable new land to go to, nor new resources to be developed. The country generally has filled up, and it has been harder to make a living.

Industries and the great cities, needing common labor, have offered the immigrants a better chance than the country; therefore they have gone directly to great industrial centers and to cities. They congregate quite naturally into racial groups in those places and preserve their own language and their old national and racial interests.

Newspapers are published for them in their native tongue. They have practically no opportunity to develop any love for the American nation or flag. Many of them are interested in American institutions to just such an extent as is necessary to get a chance to make good wages. They crowd into tenements in the cities and live under conditions of insanitation which should not be tolerated

in America. The ambition of many of the recent arrivals is to gather what money they can within a short time and return to their own country.

The immigrants who are applying to come in now are from the poorer classes of Central and Southern Europe, and generally are undesirable.

Even if many of these immigrants have a sincere desire to make the United States their future home, they are yet a menace because it is a serious question as to how much further we can go and not endanger our accustomed standard of living.

Our melting pot is no longer working successfully. The truth is that we have assimilated about all of the foreign element that we can take care of. Some of it is still undigested, and it is that element that is instigating and feeding radicalism. Our nation cannot exist half American and half foreign, any more than it could exist half slave and half free. The characteristics of a nation will shortly be lost to us if we allow the several racial groups to congregate in particular sections of our country and preserve their own languages, customs and ideals. If we permit such a development the nation will soon be broken up.

The foregoing matters are indicative of the fact that the saturation point of population to acreage within the United States is being approached.

A population must be regarded in the nature of a liquid mass which flows into a given area, gradually fills it up and then slowly overflows into other areas. In doing this, it generally follows the lines of least resistance into new and undeveloped lands.

The period of time which is required to fill up any area in this manner is usually found to be within the first phase of the life of the nation within that area. As the nation nears its entrance into its second phase of national life, the saturation point of population to acreage will be found to have been passed. So long as there are mineral resources or excess land within an area which will enable its inhabitants to produce more than is required for their actual necessities and from which they can secure a balance with which to trade, the nation will remain within the first phase of its existence.

When the saturation point of population is passed, and when the land and its resources will not produce anything more than is needed by the inhabitants for their actual maintenance, the standard of living of the inhabitants will become lower and the nation will pass into the second phase of its existence.

It is from countries which are in this situation that the immigrants now endeavoring to enter the United States are coming.

#### General Considerations.

It is recognized that immigration has other aspects than the ones presented here. This is particularly true with regard to maintaining a supply of common labor. However, our industries will not suffer as much if immigrant labor is cut off as the nation as a whole will suffer if immigration is not stopped. Sound principles of economics call for careful consideration of our policy in regard to immigration. Dangers that we can foresee should be guarded against.

The people of the United States unquestionably have a very great sympathy for the oppressed peoples of Europe, and it is right that they should assist them in every way possible. But the United States cannot continue indefinitely to play the role of "asylum" for those oppressed people, nor can it keep on dividing its country among the peoples of the world and still be the civilized country that it is today. Our people may assist the oppressed of other nations as much as they may desire, but they should do it without bringing them into our country.

Sentiment in national affairs is a luxury which must always be paid for by the nation—that is, by the people. The call of the internationalists is as seductive to many of our people as was the song of the sirens to the ancient mariners.

The United States is still in the first phase of national life. It is still expanding and progressing and increasing in population and wealth. It cannot continue to rise unless it maintains sufficient land and resources to enable its people to enjoy a high standard of living, unless it preserves those common characteristics which are typical of a nation; unless it has definite plans for its future development; unless its great body of citizens are imbued with the ideals of government and are alive to their responsibilities and duties as citizens and active in their performance.

If the citizen body of the United States forgets the principle of national self-preservation and substitutes internationalism; if it



fails to remember that national life is still a struggle; if it permits immigrants to settle within its boundaries as foreigners and not as Americans; if it substitutes the welfare and the interests of the other nations of the world for its own; if it allows itself to become overpopulated, it will give the signal for the fall of its own nation.

When the fall of the United States begins, the civilization of the world will slide backwards.

The ability of the United States to do its duty by its people as guaranteed, and to continue to uphold the civilization of the world, will be insured only by keeping its own homeland uncontaminated and its people fully up to the high standards of Christian civilization, which it has established and maintained since its birth as a nation. It can do this only by jealously maintaining and guarding the average standard of living of its people.

#### Conclusions.

The situation is this: We face two enemies who are allies. One is radicalism and the other is immigration. Radicalism would overthrow our Government. Immigration would steal our lands and compel us to divide our prosperity and property with foreigners and will ultimately ruin our nation. Why should we hesitate to protect ourselves against either of these enemies? If there was an armed force invading our shores, we would realize our danger and organize to fight it. The "peaceful" invasion of alien races is more dangerous to our future national life than a hostile army.

The right of self-preservation rests within the nation itself.

The right of the United States to possess its territories is dependent on the ability of its people to hold them by force of arms or by any other means that may be necessary.

The law of the survival of the fittest pertains to nations the same as to individuals.

The great struggle for existence, national as well as individual, is going on in this world today as it was hundreds of years ago, and as it always will. Do our citizens realize this? Or has their national life been so easy and comfortable that they think the United States can continue to exist without any struggle?

Glancing at our history for a moment we find that the earlier colonists took the land from the Indian owners by force; that they faced hardships and danger of starvation and fought for years to make the land produce a living for them; that their descendants forced their freedom from a great European power by engaging in a long heart-breaking struggle to secure it, and finally, that the founders of this nation and their descendants have maintained themselves up to the present time by force of arms and by exercising the right to take whatever action or measures they deemed necessary to protect and preserve themselves.

Shall we of today do less?

In the near future we will be forced to act to remedy this situation.

There are three courses open to us:

- (1.) We must slow up the rate of increase in population;
- (2.) We must have more land, or
- (3.) We must lower our standard of living.

Which will the nation choose?

### 16-Story Hotel Planned for New Orleans.

New Orleans, La., February 16—[Special.]—Announcement is made by A. Burglass, a furniture dealer and investor here, that he will start building, some time within the present year, on a hotel in New Orleans 16 or more stories high. It will be in the business section, University place and Common street, and Mr. Burglass has just bought the site. His plans are not far enough advanced to indicate the probable cost of the building.

Plans for two nine-story garages and service stations, with club-rooms, bureaus of information for tourists and other advantages, are announced by the Standard Motor Accessories and Garage Corporation, organized by leading business men of the city. Work is expected to begin this year. There are similar establishments in other cities, but these garages will be new to the South. They are further contributions to the building development that continues unabated.

The real estate market has been strengthening steadily since the first of the year, and may be taken as another assurance of continued building activities.

### RADICALISM IN SCHOOLS AND CHURCHES.

#### Searching Investigation Shows Alarming Prevalence of Vicious Teachings by Propagandists.

New York, February 21—[Special.]—Charges that at least three Protestant denominations were fostering persons opposed to the present American form of government; that the clergy of the Catholic Church also were affected, and that Soviet Russia is seeking trade relations with the United States, not for business reasons, but that their Government may be recognized and centers of propaganda set up in this country, were among the startling features of the sessions of the twenty-first annual convention of the National Civic Federation held in this city last week.

Everett P. Wheeler, chairman of the committee appointed to investigate radical activities in the churches, declared that Socialists, Communists and other subversive elements had gained a foothold in the Presbyterian, Episcopal and Methodist churches. Indications, he said, pointed to the same tendency in the Roman Catholic Church, and he further declared that the evidence was unmistakable that there were activities of these elements in the Y. M. C. A., the Y. W. C. A. and the Red Cross. His investigation had covered a period of 10 months, declared Mr. Wheeler, and specific information on the subject had been prepared by him for the executive council of the Federation.

Not only the churches, but newspapers, schools and colleges were similarly affected, declared Mr. Wheeler.

Allegations regarding the contemplated plans of Soviet Russia were made by Capt. W. A. Martin, formerly of the American Intelligence Service in Russia, and by Jacob H. Rubin, an American Socialist, who renounced his party after seeing its workings at first hand.

"Recognition of Soviet Russia means granting permission to the agents of anarchy to set up their machinery in this country and to operate under the protection of their own red flag," declared Henry J. Ryan, director of the Americanism Commission of the American Legion. Mr. Ryan told the Federation that the Legion was at work on plans for a movement to put the ban on the teachings of any other language than English in grammar schools. The learning of English was the most important and necessary step toward Americanization of aliens, he declared, and said that our language should be insisted upon in the lower grades of all public schools.

Only those persons advocate unrestricted freedom of speech who seek to overthrow the Government, or are moved by sympathy for the enemy aliens convicted under the Espionage Act, declared Archibald E. Stevenson, formerly counsel for the Lusk Committee. He attacked the People's Council, which has headquarters here, as the direct representative of the Soviet Government in Russia; and the American Civil Liberties Union, another New York organization, as planning to overthrow the present form of government.

Immediate action to improve the quality of the immigrants coming to this country was urged by the speakers at the closing session of the convention. It was declared that the present lax immigration system offered a constant menace to the health of the nation, and the establishment of public health stations at important European ports was urged.

Mrs. Jean Muldrew, a Canadian expert, told of the manner in which Canada selected her immigrants, and then watched over them after their arrival.

### Norfolk Wants Bids on Large Pumping Engine and Other Water-Works Equipment.

The City of Norfolk, Va., has requested bids, to close March 17, for equipment costing \$700,000 to provide for water-works improvements. The equipment includes a 15,000,000-gallon cross-compound pumping engine; three 225-horse-power straight tube horizontal water-tube boilers; extension of present brick stack; one 500-horse-power open feed-water heater; two 500-horse-power boiler-feed pumps; industrial track; coal and ash-handling equipment; feed-water regulators; apparatus for flue gas analysis; draft gauges and damper regulators. The bids are to be addressed to the Director of Public Works, City of Norfolk, Va., and plainly marked "Bid for Water-works Equipment."

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# Germany's "War to the Knife" for World Trade

By COURTENAY DE KALB.\*

The revelations made by Mr. Ben. K. Raleigh, in the MANUFACTURERS RECORD of February 10, showing that Germany has effected a thorough organization for commercial dominance of the world, is the corollary to reports of the steps that were being taken to correlate all industry on a broader kartel system, which were cabled to this country some weeks ago. There were divergent opinions in Germany as to her future policies, expressing the viewpoints of political factions, some of which were more concerned with the status of the workmen than with the success of the nation as a whole in recovering the ground lost through the war. The victory of Hugo Stinnes was so complete that it was evident that a revival of the onslaught of Germany for conquest of the markets of the world was a fact to be reckoned with. German industry has been what the Germans themselves call "Stinnesized." The association of industries has been made wider and more complete than ever before; not only are the manufacturers in the combination, but the producers of raw materials are also included. It constitutes the most flexible system for co-operation, and for support to underselling propaganda for securing a grip upon foreign markets, that has ever been adopted as a national program. It means that industry, in all its diversified phases, becomes a unit under the control of the selling organization, with the distribution of losses and profits so as to prevent collapse of any portions of the industrial mechanism, and to eliminate the disasters that might result from competitive bidding. Whatever semblance of competitive bidding there may be will constitute merely a pretense to blind the foreign buyer to the truth.

The open political victory obtained by Hugo Stinnes, in recognition of his proposed organization of German industry, was only the consummation of plans that had been mapped out immediately after the armistice. As early as January, 1919, our Government was fully aware of the danger of a serious invasion of the German into foreign trade, and preparations were being made to combat it so far as it might affect our own prosperity. It cannot be said that very successful measures resulted, but this was due, probably as much as to anything else, from the lack of genuine interest shown by American capitalists in securely entrenching themselves in foreign business. As a people, we have been extremely slow to lay firm foundations for export trade.

It was recognized that Germany intended to enter as competitors for South American trade before the first anniversary of the armistice. A shipload of German manufacturers and bankers arrived in Rio de Janeiro and held conferences with the leading Brazilians and made a strongly favorable impression. They did not go to take orders; they did not merely suggest that they would resume their commercial relations at an early date, but that they would also co-operate with Brazilians to establish certain manufacturing establishments, which evidently could be done successfully. That was the tempting bait that was offered, and it was very different from the habit of our people, who are concerned in making sales of our goods just as we manufacture them for ourselves, to be sold to the Brazilian for cash against documents at port of shipment. The American has been slow to realize that trade is engendered by making common cause with the foreigner in the development of his own resources. Such development only stimulates the demand for other goods, for machinery, and for miscellaneous supplies. The foreign investor, bringing out his skilled labor to inaugurate new industries, adds to the demand for the goods to which these skilled workmen are accustomed at home, and by example and imitation the demand for such articles is increased in the country where the new industry is established. Moreover, such association in industry between the nationals, for example, of Brazil and the foreigner breeds intimacies that are of the utmost value in drawing closer the bonds of commerce between the countries involved. We do not take advantage of these opportunities, but the German does, and he was telling the

Brazilians that he meant to co-operate with them, even while we and the Allies were discussing how we would make the German pay the penalty for his crimes.

The German did not take this penalty seriously. He has counted upon leniency from the first. He has called the proposals for indemnity preposterous and impossible, but he never assumed that they would crush him. He knew that he could not make the great sums which it was proposed to assess against him unless he were allowed to produce on a great scale, and though he might have to hand over a large part of the profits as indemnity, he knew that he would have to be permitted to retain a large portion of them for expansion of his industries as a necessary condition for producing the sums demanded. Moreover, he knew that the victors themselves would have to help finance him if he was to make the money with which to pay the indemnities. All this meant that he would be made great, that his trade would increase throughout the world, and that in the end it would leave him the strongest of the nations, able to defy the world.

When the Council, at its recent meeting, undertook to fix an export duty of 12½ per cent on all German goods shipped abroad, the Allies were really applying a penalty. It meant that Germany could not develop her trade as she had expected to do. If this policy is adhered to without wavering, the plans of Germany for dominance will be frustrated. It remains to be seen whether the order will be carried out with firmness. Rumors of relenting in certain quarters already cast doubt upon the seriousness of this purpose for making Germany suffer the legitimate consequences of the war.

Men who have been mentioned in connection with high posts in our new International Banking Corporation have been pointing out in this country that if we extend credits to Germany her commerce with us can revive, and that it will open the doors to a nation with 65,000,000 of people. This sounds seductive to the ear of the exporter, and his argument will be listened to with respect by many who will fail to comprehend that the extension of our trade with the Germans will be so overbalanced by the inroads they will make into our trade with other nations that it will be equivalent to using a good gold dollar to buy a "gold brick." In England, likewise, there are unthinking opponents to applying the lash relentlessly to the Germans. On one side are the blind Socialists who think of socialism and Marxism instead of thinking of the welfare of their own country, and who think that the millenium will come in some mysterious way if these theories of government can be put into effect. These men are the fighting front of the agitators who, at the present time, are doing the destructive work upon our existing system without a definite plan for construction after the revolution shall have swept away the old order. The other faction that opposes a rational method of dealing with the great offender against civilization consists of a large group of merchants and manufacturers who see the 65,000,000 potential consumers in Germany, who will certainly buy something if they have the opportunity to make money, and, as commerce is, to a considerable extent, a matter of propinquity, they assume that they will sell a large quantity of goods if German industry is not crippled. These narrow-minded and darkly-blinded laboring men, and these narrow-minded business men who think only of today's shillings instead of next year's pounds, have votes, and votes are what sustain Lloyd George in power.

No one knows better than the English how instantly the Germans began their crusade for commerce after the armistice. They know how German emissaries were sent all over the world, preparing for the commercial war that was to follow. They knew before we did of the arrival of the German steamer Kronprinz Gustaf Adolph at Buenos Aires on December 8, 1919, with a full cargo of all kinds of merchandise, including 50 cases of agricultural machinery, 1290 cases of fence-wire, 1428 cases of hardware, 42 cases of electric fittings, 56 of electric motors, 61 of small machinery, 115 of incandescent lamps, 202 of glassware, many more of metal goods, hosiery, silks, cottons, harness, sur-

\*Mr. De Kalb returned last year from a thorough investigation in Spain of its mineral resources and German propaganda there as a special agent for the Bureau of Foreign Trade of the United States Department of Commerce. He therefore knows whereof he speaks from this intimate study of the situation.

gical and medical supplies, toys, besides 18 cases of printed matter declared as trade propaganda. This was forestalling the actual "Stinzenization" of German industry by a full year, and showed clearly enough what the Germans expected to do.

Early in 1919 a German trade journal was started in Spain, which boldly asserted that Germany had brought the war to a stalemate, and had issued triumphantly as the nation whose soil had not been touched by an invader. They announced that they were coming back into the commercial field to supply the world with the "superior" manufactures which they alone knew how to make. On the front cover of this magazine was a striking picture of the Winged Victory, as if to taunt the French who guard this treasure of the Greek sculptor's art in the gallery of the Louvre. German trade catalogs were distributed broadcast over Spain, and most of these were issued before the war, and carried without change the prices in marks of that early date. Of course, these were "list prices," formerly subject to discount, but even so, they were far lower as they stood than the prices at which the French and English could manufacture the same articles. These included small wares, hardware, drawing instruments, kitchen utensils, chemicals, etc. It was not necessary to make a discount, because the depreciated mark automatically gave a heavy discount when the Spaniard should make his remittances.

In Spain and elsewhere it was a common practice to buy these depreciated marks for speculative purposes, and in that country it was usual to deposit the money in marks to the credit of the speculator, in German branch banks, and in some Spanish banks that held close relations with banks in Germany. In this manner large sums were made available for loans by these Spanish branch German banks. Such loans were made to Germans for the acquisition of holdings in Spanish enterprises and for the purchase of mines. It was in this way that large additions to the mineral holdings adjacent to the great Guindo lead-silver mines in the district of La Carolina were made. The Guindo is the largest lead-silver mine in Spain at the present time. Not only were they financed for the purchase of extensions to their deposits, but for the addition of new plant and equipment. In the same way Germans bought the famous Quinientos lead-silver mine in the Linares district, which had been one of the famous bonanzas, but which the timid owners had never explored in depth to ascertain whether or not new ore bodies might be disclosed. So certain were the German engineers of the outcome that the mine was bought outright. They also paid down money to acquire the option on the important concession of Mariano Robles at Linares for a drainage and exploratory tunnel to undercut the old lead mines of the district and to open any new ones found in driving this tunnel. These are only examples of the way in which the Germans were plunging into enterprises in Spain almost before the echo of the big guns along the Marne had died away.

With their own resources in Spain, aided by the funds made available by speculators in marks, they were buying deep into the heart of productive enterprises in that country. The companies in which they secured controlling interest were, of course, nominally Spanish, and this was regarded as an advantage in the propaganda that they contemplated in seeking Latin-American trade. It would enable them to approach the South Americans as "Spanish" companies to offer them "Spanish" goods, at prices that cannot be matched in any of the industrial countries of the world. This is a great advantage, for there is a sentimental preference for Spanish manufactures in Latin America when they are of equal quality, and the Spanish factory output of today is not only as good as here or in England, but in many cases it is superior. The Spanish cotton and woolen goods are above the standard now tolerated in this country. They are as good as ours used to be some years ago before we had learned how to stretch the raw material to measure larger yardage. The German influence will not neglect any opportunity for economy in output, but they have a valuable reputation on which to trade in pushing their manufactures from Spain.

A first essential for our own protection is to exclude German goods by means of a tariff. If we hope to maintain a hold on export trade to South America, we must not allow our own manufacturing enterprises to be crushed out of existence by German competition, and such competition, a war to the knife, is surely coming unless we apply corrective measures without delay.

## A \$5,000,000 FLORIDA ORANGE ENTERPRISE.

### Preparing to Plant 4000 Acres in One Variety of Orange on the Temple Terraces Development Near Tampa.

Land-clearing operations are under way on the Temple Terraces citrus fruit and residence subdivision project near Tampa, which, it is said, will be the biggest of its kind in the world. Work is going forward rapidly, and it is expected that planting will begin on the first 200 acres by February 20. In general, the proposed plan of this development, as outlined by the Temple Terraces, Inc., of Tampa, Fla., is estimated to cost \$5,000,000, and embraces, in addition to the planting and care of orange groves for individual purchasers, reservations for residential districts, parks, golf courses, club grounds, streets, electric-railway extensions, river bulkheads, docks, bathing pool, bathhouses, etc.

Temple Terraces is located on what is claimed to be ideal citrus-fruit-growing lands, fronting on the bluffs of the Hillsborough River, about eight miles from Tampa, and may be reached by automobile, and also by the Sulphur Springs trolley line within three miles of Temple Terraces.

Temple Terraces comprises about 4500 acres bought by the present owners from the estate of the late Mrs. Potter Palmer of Chicago, which has extensive holdings in Florida. More than 4000 acres of this tract will be planted in a single variety of oranges, the luscious Temple oranges from the Buckeye Nurseries, said to be operating the largest citrus nurseries in the world, which were the introducers of the Temple orange and which now control the Temple orange budwood rights.

Planting and care of Temple Terraces groves will be under the supervision of the Buckeye Nurseries, the same organization which developed Lucerne Park, and which is supervising many other successful citrus properties. Instead of the usual 50 to 70 trees to the acre, approximately 100 trees to the acre will be planted.

Temple Terraces groves will be sold to individual purchasers on a cash and deferred payment plan, in 2½-acre, 5-acre to 10-acre and larger units. The purchase price includes a six-year care by the developers instead of the usual five. The company will pick and market all fruit for the six-year period at a cost-plus service charge of the net proceeds, and the proceeds of the fruit will be applied against the last payment or payments until balanced, the remainder going to the grove owner. The company's permanent organization will also care for groves after the six-year period for non-resident owners, if desired, on a cost-plus basis.

While ownership in Temple Terraces is placed upon a commercial or investment basis, their value, it is expected, will be greatly increased by the many improvements that are planned for those portions of the property held in reserve for parks, streets, clubhouse grounds and home sites. Of the large area devoted to these purposes, the company contemplates planting much of it in ornamental trees, shrubs and flowers. Altogether, it is one of the most ambitious undertakings of its kind ever attempted.

D. Collins Gillette of Tampa, a managing partner of Buckeye Nurseries and M. E. Gillett & Son, vice-president Florida Citrus Exchange, director Citizens-American Bank & Trust Co., Tampa, and other prominent enterprises in Florida, is president of Temple Terraces, Inc.; B. I. Hammer of Tampa, vice-president Florida Orange Growers' Corporation, former development agent and now a director of Seaboard Air Line Railway, and identified with other high-standing organizations, is vice-president of Temple Terraces; Col. James R. Brazer of Tampa, officer and director of Indiana Loan & Trust Co., and Mrs. M. C. Fowler of Tampa are also vice-presidents of the corporation; Vance W. Helm of Miami, president Everglades Sugar & Land Co., president Land Owners' League, representing approximately 20,000 persons, and copromoter with Mr. Gillett of the million-dollar Cross-State Boulevard across the Everglades, is secretary and treasurer of Temple Terraces, Inc.

The Temple orange was selected for what the owners believe to be its pre-eminence in flavor, aroma, looks and keeping qualities. The Temple variety is classed as a mid-season to late orange. It is in fair shape for market by January, but best from February to May, when it can be sold as a "kid-glove" orange, for which the demand, it is said, never fails.

# From a Sales to a Turnover Tax in Canada

**BUSINESS PROFITS TAX WILL PROBABLY BE ABOLISHED—CONSIDERED DETRIMENTAL TO TRADE DEVELOPMENT.**

By G. W. AUSTEN.

When the Canadian Minister of Finance last May introduced a sales tax there were many shakings of wise heads respecting the effect on business. Many business men thought that it would force business amalgamations to save duplication of the 1 per cent. But the experience of the best part of a year with it has proved that it can be successfully applied, there is no exceptional burden caused by it on business or the public, and that an extension of it to a general turnover tax, in place of all special taxation, would be much favored. Very probably when the next budget is brought forward in the Canadian Parliament business profits taxes will be abolished and all other special levies on business, and a general turnover tax of 1 per cent put on. The revenue from this will undoubtedly be more than from other methods combined.

The taxation proposals for the year 1920 in Canada were varied. The Government had to raise a very large extra sum to meet heavy after-war commitments. At the time the Canadian public was buying with extravagant abandon, regardless of prices, and the Dominion Government deemed it wise, in view of inevitable reaction, to check this orgy, luxury taxes were announced. These taxes applied to retailers mostly. As first outlined, there was a tax of 10 per cent on the total purchase price of boots and shoes retailing at \$9 or over; on men's and boys' suits at more than \$45; men's and women's overcoats at more than \$50; on fur coats and robes at more than \$100; on women's dresses at more than \$45; women's suits at more than \$60; on hats, hose, neckwear, shirts, purses, gloves, fans, opera cloaks, ivory-handled cutlery, cut-glass, velvet and silk fabrics, lace ribbons, silk embroidery, sporting goods, trunks at more than \$40, valises at more than \$25, etc. The list was afterwards changed somewhat to provide for a tax of 15 per cent on the excess on boots and shoes over \$9, men's and boys' suits at more than \$60, etc. This was regarded as more reasonable, because the straight 10 per cent tax was not a luxury tax at all at the low-price levels mentioned as minimums, but a tax on necessities. Then the Government put a 10 per cent tax, to be paid by the manufacturer or importer, on canoes, motor boats, cameras, candy and confectionery, chewing gum, firearms, shells and cartridges, pianos, organs, musical instruments, plated ware, etc. It put a tax of 20 per cent on cigar and cigarette holders, higher grade pipes, humidors, hunting, shooting and riding garments, pocket knives, Oriental rugs, expensive carpets, chandeliers, etc., this to be paid by the purchaser at time of purchase in the retail store. Twenty per cent was put on mechanical player-pianos, graphophones, etc., to be paid by the manufacturer or importer. On top of this came the sales tax of 1 per cent, applied to all manufacturers, wholesale dealers, jobbers and importers—except those handling coal, essential foodstuffs, cattle foods and goods for export.

It will be at once recognized that the taxation list applied, in one way or another, to most dealers in commodities. The luxury taxes checked buying immediately. Producers of luxuries found their business knocked on the head. As a temporary measure, to correct extravagance and inflation, this was a wise move, but just before Christmas the Finance Minister cancelled the luxury taxes, as applied to retailers, keeping a tax on candies and confectionery, automobiles, etc. From May to November the luxury taxes had brought in a total revenue of only \$5,000,000, approximately, while the sales tax brought in \$17,203,000, the manufacturers' tax \$14,838,000 and stamp tax \$5,105,000. The luxury tax was not a good producer, because people refused to buy the goods on which it applied, and merchants marked down their higher priced stuff and marked up their lower. The merchants had a constant fuss about it, and their sales forces were discouraged by the indignant treatment of them by customers. When prices had been reduced and a sanity in purchasing had been restored, the removal of the taxes did not lead to a renewal of the profiteering orgy, but

business improved considerably. Prices were reduced in most lines by the amount of the tax. The sales tax of 1 per cent on manufactures is computed monthly and returns made to the Government. This has been the easiest of all taxes to account for and check up.

When commodity and manufactured article prices are declining because of general business conditions, it is easy for a Government to impose an indirect tax on sales or turnover without interfering with the general course of trade. It was thought in Canada at first that where raw material in one hand paid 1 per cent, in another 1 per cent more, and then 1 per cent again in each case in the process of manufacture or handling by different firms, that the total of 5 or 6 per cent tax thus accumulated would be a heavy drag on business. In the general slackening of industry, it is not possible to ascertain just what effect this particular doubling up of the sales tax has had. There are too many other complicating factors. But enough has been proven to make it clear that the inauguration of a general turnover tax, applying to all persons in business, would not be a hardship on the consumer. In abolishing the profits tax, and other special confiscatory devices, the Government would give business an incentive to enterprise, and make the application of capital to industry much more effective.

The business profits tax in Canada was amended last May to be 20 per cent on profits of from 10 to 15 per cent, 30 per cent on profits of from 15 to 20 per cent, 50 per cent of profits of from 20 to 30 per cent and 60 per cent of profits over 30 per cent. As in the United States, this profits tax has encouraged waste and inefficiency in Canada. It has been a deterrent of enterprise. A business slump is partly the consequence of lack of confidence and optimism. Where there are few rewards in sight, but heavy risks, capital is necessarily shy. The Governments thought that in imposing business profits taxes they were getting a share of the excessive earnings of profiteers. Actual experience has, however, shown that when the tax has to be paid, it is figured in like an overhead charge as part of the general cost of manufacture, and prices are raised by that amount in order that the usual profit, in volume, if not in percentage, may be realized. The condition of trade has allowed this to be done until lately. Now the business profits tax simply causes stagnation, because the Government exaction cannot be passed along very well, and business is short of capital when it has to make huge payments.

The business profits tax in Canada brought in \$12,000,000 to the national treasury in 1916-17, \$21,000,000 in 1917-18, \$32,000,000 in 1918-19 and \$44,000,000 in 1919-20. The increase was largely the consequence of a rapid inflation in prices and volume of trade, and a considerable part of the increase in prices was caused by having to pay such amounts to the Government.

Canada is much more "sewed up" by trade combination, price agreements and "business co-operation" than is the United States. We have relatively more larger concerns and fewer smaller ones, and prices are regulated from within a trade much more effectively. But the bankers of Canada are now out denouncing the profits tax as detrimental to business, and the Government is apparently wishful of assisting the business recovery now about due. The success of a limited manufacturers' tax of 1 per cent shows that if retail dealings, as well as of corporations and middlemen in general, were included, Canada should get at least \$100,000,000 a year from this source without increasing the general commodity price list by more than 2 or 3 per cent. Having entire freedom to manage their finances as they pleased, the business concerns of the country would at once begin more vigorous production, bring about better competition and encourage enterprise. Prices then should be lowered as much as they would be artificially increased if all business paid 1 per cent on turnover.



### Delta Farmers Disposing of Low-Grade Cotton.

The Mississippi Delta Cotton Export & Trading Co. has contracted with certain mills in Central Europe for the manufacture of 50,000 bales of last year's cotton, the manufactured product to be sold on markets to be selected by the Mississippi Delta people. Payment for the manufacture is to be made in cotton, and no actual cash necessarily to be involved in the transaction.

The 50,000 bales of the staple already contracted for are believed by the proponents of the plan to be only the forerunner of further similar contracts, the total of which may run into several hundred thousand bales. The cotton involved is all a part of last year's crop, which cost 37 cents a pound to raise, and which, because of its grade, is virtually unsalable.

It will be recalled that there are more than 2,000,000 bales of this low-grade cotton now in the United States which is unsuitable for manufacture in American mills. It is the hope of the proponents of the plan that a large part of this cotton in storage may thus be disposed of. The mills of Central Europe, it is pointed out, are particularly suited for the spinning of these lower grades of cotton. Positive denial is made of the published statements that the cotton is to be sold for 20 cents a pound. The entire transaction is one of barter, it is declared, and cash need not necessarily pass in the deal.

### Daily Average Crude Oil Production.

The American Petroleum Institute estimates that the daily average gross production of oil in the United States for the week ended February 12 was 1,273,200 barrels, as compared with 1,282,615 barrels for the week ended February 5.

The estimated daily average gross production of the Mid-Continent (light oil) field, including Oklahoma-Kansas, North Texas, Central Texas and North Louisiana, was 654,095 barrels, as against 662,705 barrels, showing a loss of 8,610 barrels.

The combined estimated daily average gross production of the Southwest fields was 771,345 barrels, as compared with 782,585 barrels, a loss of 11,240 barrels.

Oklahoma-Kansas is credited with a daily average gross production of 363,220 barrels, a gain of 320 barrels. North Texas shows a loss of 355 barrels, Kemp-Munger-Allen pool declining 600 barrels to 4000. Central Texas is credited with a loss of 3535 barrels. In this field Stephens county and Desdemona are both estimated at figures appreciably under those of the preceding week. North Louisiana is credited with a loss of 5049 barrels. Claiborne parish is reported at 52,945 barrels, a decline of 5395 barrels. In the Gulf coast, Goose Creek is credited with 16,000 barrels, a gain of 500 over the preceding week; Hull, 39,000 barrels, a gain of 1000; Blue Ridge, 1700 barrels, 800 loss; West Columbia, 29,000, an estimated decline of 1500 barrels, and Humble, 7500, 1400 loss.

The estimated daily average gross production of Wyoming and Montana was 55,855 barrels, a gain of 1825 barrels.

### Extension of Baltimore Water Facilities—\$5,000,000 to Be Expended for Raising Dam and Other Improvements.

Approximately \$5,000,000 will be expended in extension of and improvement to water-works facilities at Baltimore, this development making necessary the inundating of two villages, Phoenix and Warren, in Baltimore county, and a wide expanse of territory. Specifications for the work have been prepared by William A. Megraw, water engineer, under the direction of the Water Board. The money for making the improvements will be made available from the \$15,000,000 water loan of 1920 for all purposes.

The present dam, which is located at Lock Raven, on the Gunpowder River, will be raised ultimately to a height of 240 feet from its present height of 188 feet, and will be of solid concrete masonry construction. The specifications are now prepared call for a height of 204 feet by November, 1921; a height of 210 feet by April 1, 1922, and 240 feet by July 1, 1922. Bids will be requested about March 16, according to present plans. The work will include approximately 40,000 cubic yards of concrete.

It is estimated that the work on the dam proper will entail an expenditure of about \$500,000. The cost of acquiring the flooded property will be the most expensive part of the project.

### Big Flow from Deep Texas Well.

Goose Creek, Tex., February 21—[Special.]—Discovery of a big producing oil pool in the Goose Creek field at a depth of 4508 feet has caused a stir among oil operators here. It has a much larger production than any well ever before brought in at that or greater depth in the United States, it is asserted. It has a flow of 2500 barrels of pipe-line oil through a one-half-inch choker. It is the belief of officials of the Crown Oil Co., which brought in the well, that if opened up wide the well would flow 4000 to 5000 barrels a day.

There have been deeper wells than this one, but all were of much smaller production. For instance, the Texas Company in the latter part of 1919 brought in a well in Young county at 4634 feet, flowing 115 barrels. This well is now producing about 15 barrels a day. In California many deep wells have been drilled, but so far as is known none has had the production shown by the one just drilled here.

In December E. F. Simms & Co. brought in a well at Goose Creek at 4103 feet with a flow of 40 barrels and much gas. In January the Humble Oil & Refining Co. brought in a 250-barrel well at Goose Creek at 4195 feet, and the Gulf Production Co. has brought in two, one flowing 55 barrels at 4200 feet and another flowing 100 barrels at 4167 feet.

It is stated by oil men that it would have been impossible to drill a well to this depth a few years ago. It is only by the use of modern equipment that deep drilling can now be done. The theory that pools of oil exist at depths of 4000 to 5000 feet in other oil fields of the State is to be thoroughly tested, it is stated.

### Weekly Coal Production Again Shows Decline.

The weekly report on coal production issued by the United States Geological Survey shows that the total output for the week ended February 12 again established a decline, being 7,861,000 net tons, or 265,000 tons less than the preceding week. Anthracite coal production continued heavy, the total for the week being 2,048,000 net tons, or 63,000 tons more than the previous week. Productions of beehive coke was 227,000 net tons for the week, a decline of 6000 tons with similar comparison.

A new record in the production of fuel briquettes was made during the year 1920, according to reports received by the Geological Survey from briquetting plants, the total output being 567,192 tons, or nearly twice as much as in 1919, and also 19 per cent more than 1918, which was the maximum year. Briquettes are made mostly from anthracite culm and fine sizes, but semi-bituminous coal and some oil gas residue are also used.

### \$300,000 Transaction in Coal Lands.

Charleston, W. Va., February 19—[Special.]—Negotiations have been completed under the terms of which a Philadelphia silk manufacturer has taken over the coal leases of the Maryland New River Company, having incorporated the Atlantic Coal & Iron Co. for that purpose. There are about 3500 acres in the tracts leased, owned by the Boones and the Pritchard estate. The consideration involved was close to \$300,000. As soon as conditions warrant, the new leasing company will proceed to drive 10 new openings, it is understood, on the river front, and will establish a new town, erecting about 50 dwellings for miners. The royalty basis at this lease is 10 cents a ton.

### Small Hope for Tin in New Mexico.

Washington, February 21—[Special.]—Stream tin was found in 1918 along Taylor Creek, at the headwaters of the East Fork of the Gila River, near what is called "Cave City," in Central New Mexico. Tin prospects were located in this area in 1919. J. M. Hill of the United States Geological Survey has recently returned from a geological survey of the regions referred to, and reports as his conclusion that he is not strongly impressed with any of the prospects or lodes seen by him, and that on the whole the "district does not look promising as a possible producer of this much-needed metal."

# Need for Abrogating Railway Wage Agreements Shown by Executives in Appeal to Labor Board

By HARRISON CRUIKSHANK.

What proportion of the earnings of the American railway is being paid to the employees of the roads, and what proportion is available to stockholders? The answer in part to this question apparently can be found in the supporting evidence put forward by the American Railway Executives in their appeal to the United States Labor Board for the abrogation of the national wage agreements. The railway executives say that these national agreements are rendering it impossible for the railroads to earn more than bare operating expenses, or, in some cases, their taxes and fixed charges.

Figures adduced by the railroad executives indicate that there could have been effected during the year just past a saving of from \$20,000,000 to \$25,000,000 monthly, and that, instead of a deficit for the last four months of 1920 of some \$30,000,000, there should have been a comfortable surplus.

In considering the question it might well be stated, first, that there are five of the so-called national agreements and eleven other sets of "rules on working conditions" which are the subject of appeal to the Labor Board.

They were made during the period of Federal control between the Federal Labor Board administration and the railroad employees through the heads of the unions acting as the representatives of the employees, and they cover all classes of railroad work. The first of these agreements was made October 20, 1919, and the last six days before the roads were returned to the operating companies for private operation.

These rules made wages and working conditions on the railroads identical throughout the United States, regardless of differences in local conditions, and their operation, it is claimed, puts upon the railroads hundreds of millions of dollars of operating expenses, much of which, it is charged, is for labor which was never performed. The actual cost is problematical. It is estimated from \$250,000,000 to \$300,000,000, and may be even more.

In asking for the abolition of the national agreement, the railroads contend that such action by the Labor Board simply would remand conditions to those that existed prior to the war, with the exception that the Adamson Act would not be abrogated. Their proposals, they contend, preserve to labor all the peace-time advantages gained through years of study, conferences, negotiations with labor unions and arbitration. It is interesting here to show in tabulated form the ratio of compensation of employees to revenues and expenses, as well as the regular annual compensation of railway employees for the period from June 30, 1911, up to and including the first quarter of the year 1920:

RATIO COMPENSATION OF EMPLOYEES TO REVENUES AND EXPENSES AND AVERAGE ANNUAL COMPENSATION OF EMPLOYEES—CLASS I ROADS, 1911 TO 1920.

Year ended	Total operating revenues.	Total operating expenses.	Total compensation to employees.	Ratio total compensation to—		Number of employees.	Aver. annual compensation per railway employee.
June 30.				Revenues.	Expenses.		
1911.....	\$2,752,497,297	\$1,902,994,333	\$1,167,855,804	42.43	61.37	1,599,854	\$730
1912.....	2,805,006,544	1,959,094,811	1,209,716,686	43.13	61.75	1,642,119	737
1913.....	3,108,361,215	2,173,463,563	1,338,612,385	43.06	61.59	1,759,020	761
1914.....	3,031,326,963	2,203,423,812	1,337,344,135	44.12	60.69	1,640,029	815
1915.....	2,871,563,047	2,021,160,614	1,190,223,755	41.45	58.89	1,433,964	830
1916.....	3,381,597,866	2,210,892,786	1,366,100,518	40.40	61.79	1,590,158	854
Dec. 31.							
1916.....	3,596,865,766	2,357,398,412	1,468,576,394	40.83	62.30	1,647,097	892
1917.....	4,014,142,747	2,829,325,124	1,739,482,142	43.33	61.48	1,732,876	1,004
1918.....	4,880,953,480	3,982,068,197	2,613,813,351	53.55	65.64	1,841,575	1,419
1919.....	5,143,589,998	4,398,408,414	2,836,800,000	55.15	64.50	1,913,000	1,483
1920*.....	6,233,000,000	5,818,000,000	3,600,000,000	57.76	61.88	1,993,000	1,806
Three months ended							
March 31, 1920.....	1,386,361,951	1,250,764,589	795,616,330	57.39	63.61	1,993,524	....

\*Partially estimated.

Note.—Number of employees for the year 1911 to 1914 represent the number on the payrolls on June 30, while the later years relate to the average number in service during year. Revenues and expenses for years prior to 1914 includes returns of "outside operations" in order to be comparable with later years.

The Adamson law became effective January 1, 1917, and it will be noted by consulting the table that an immediate and vast increase in the proportion of revenues paid to labor became apparent. The figures for the period from June 30, 1911, to March 31, 1920, inclusive, are those of the Interstate Commerce Commission. It is impossible to obtain accurate figures for later periods of the

year just past, since the Commerce Commission's figures are not yet available in their entirety, and there is such a variation in the estimates of the amount of the salary awards by the Labor Board of 1920 as to make accurate calculation almost impossible. As an example, the Labor Board's estimate of the actual increase in salaries during 1920 is \$558,000,000, as against the estimates of the railroad executives that it may reach or exceed \$625,000,000. These conflicting calculations, however, are beside the issue. The essential fact is that the ratio of compensation to employees to total revenues has risen from 42.43 per cent in 1911 to 57.39 per cent in 1920.

The latest estimated figures for the four months ending December 31, 1920, would show a decrease in the ratio paid to employees to approximately 50 per cent. This is largely to be accounted for through the fact that there have been released by the railroads of the country 200,000 employees since September 1, 1920. This on the evidence of railroad executives at Chicago.

On February 2 Vice-president W. W. Atterbury of the Pennsylvania Railroad and chairman of the Labor Committee of the railways, said in testifying for the Labor Board:

"The most concrete and abundant evidence of the inefficiency and waste being caused by present rules and working conditions is afforded by the statistics regarding the payroll of the employees in the shops.

"Since the National Shop Crafts Agreement is the principal one now under consideration by the Railroad Labor Board, statistics regarding the payroll in the shops are most pertinent at the present time.

"In 1917, before Government operation was adopted, the railways employed 302,828 machinists, boilermakers, blacksmiths, electricians, air brakemen, car inspectors, car repairers, other skilled shop employees and machinists' helpers and apprentices.

"In 1920, when the number of locomotives and cars to be maintained was only slightly larger than in 1917, they had 443,774 employees of the above classifications, an increase of 140,946, or 47 per cent.

"The total wages paid to these employees in 1917 was \$317,879,549, while in 1920, after the advance in wages granted by the Railroad Labor Board last July, their wages were running at the rate of approximately \$890,000,000 a year, an increase over 1917 of 180 per cent.

"Another class of employees included in one of the national agreements is the clerks. In 1917 the railways employed 184,063 clerks, while in 1920, when business was normal, they were employing 238,693 clerks, an increase of 29 per cent.

"The total wages paid to clerks in 1917 was \$189,000,506. After the wage award made by the Railroad Labor Board the wages of clerks were running as near as can be estimated at the rate of \$390,300,000 a year, an increase of 112 per cent.

"Another of the classes of employees included in the National Agreements is the maintenance of way employees. In 1917 the rail-

ways had 350,000 section and unskilled laborers, and in 1920, 376,000. The wages paid to them in 1917 amounted to \$220,000,000, while after the wage award made by the Railroad Labor Board their wages, as near as can now be estimated, were running at the rate of \$476,000,000, an increase of 112 per cent.

"It requires only a glance at these figures to see that a very large part of the increase in the amount of wages paid to each of the classes of employees mentioned was due, not merely to the advances made in wages, but to an abnormal increase in the number of employees.

"This increase in the number of employees, in turn, was due to rules and working conditions which destroyed the efficiency of labor, reduced the output per man and rendered it necessary, if needed maintenance work on the railways was to be done, to employ a much larger number of men. The increase of over 140,000, or 47 per cent, in the number of certain classes of employees in the shops is especially significant.

"The total number of employees of the railways increased under Government control by 261,000. It is a fact of the highest significance in its bearing upon the matter of agreements, rules and working conditions, whose nullification we have asked the Railroad Labor Board to approve, that of this increase, 232,563 occurred in shop employees, clerks and maintenance of way employees, with whom the Railroad Administration made the three principal National Agreements.

"It would be difficult to cite better evidence of the deadly efficiency destroying effect of these agreements."

Evidence submitted before the Labor Board is replete with instances of the effect of the present "rules and working conditions" under which the roads have been operating. For instance, it is stated that a car repairer on the Virginian Railway was paid \$1000 for work he never did. He was laid off, with other employees, because there was no work for him. When he became entitled under his seniority rights to be re-employed, he received back pay and overtime. Four men of the same road, it is stated, were sent out on the line to do a piece of work which took four hours and 33 minutes. The company, under the "rules and working conditions," was compelled to pay these men for 112 hours' work. The shop crafts' agreement provides that when employees are required to check in and out on their own time they shall be paid for one hour extra at the close of each week, no matter how few hours they have worked. This rule in the first six months of 1920 alone is alleged to have cost the railroads \$6,600,000.

An engine was placed in the Baltimore & Ohio shops for certain repairs. Because of the national agreement, the railways claim, it is necessary for members of five crafts to perform parts of this work, whereas formerly the entire operation was performed by members of two crafts. A leak in the boiler requires the sheet-metal worker to loosen the jacket, the locomotive carpenter to remove the lagging, the boilermaker to caulk the leak, after which the locomotive carpenter replaces the lagging and the sheet-metal worker tightens the jacket. As these employees usually have a helper, six men are employed on a trivial job that should have been done by the boilermaker and helper.

These cases may be multiplied indefinitely from the reports of the testimony at the hearing, but those cited will suffice to show that there is no small merit in the claim of the railroad chiefs that by the abrogation of these "rules and working conditions" almost unbelievable sums might be saved to the railways.

Mr. Atterbury stated in the course of his testimony "that the fight which the railroads are making is not only their own fight, but the fight of the farmer, the consumer, the working-man and the employer in every industry of the nation."

Had conditions remained as they were last year, when the authorization for the increase in wages was made, it is possible that because of the general conditions of high prices and a more prosperous people there would have been no crisis such as at present exists. This, however, is purely problematic. The situation in the railroad today is gravely acute. Estimates submitted to the Labor Board show that 36 railroads in various sections of the country failed to earn their operating expenses in the month of January, and 28 additional railroads, the estimates show, did not earn their expenses and fixed charges during this last month. Assuming the number of excess employees actually on the payrolls

of the railroads at 140,000 in round numbers, and assuming the average rate of pay for railroad employees at \$1800 a year, both of which figures are conservative, we have the simple problem in mathematics which shows that by the elimination of "rules and working conditions" there will be saved to the railroads \$252,000,000.

This much for the question of wages alone. There has, of course, been a tremendous increase in the cost of raw materials to the railroads, and especially in the amount paid for coal. The railroads, equally with the individual, have felt the huge increase in fuel costs, and it has been estimated conservatively that \$200,000,000 annually could be saved to the railroads if coal be reduced \$1 per ton. This only in passing; the wage question is the issue vital to our subject.

Interesting in this connection is the statement of the net operating income of the Class I railways of the United States for the months of September, October and November, 1920. The returns shown must be viewed from the standpoint of annual earning basis of 6 per cent, which, under the Transportation Act of 1920, the railroads of the country are entitled to earn:

#### NET OPERATING INCOME COMPARED WITH 6 PER CENT. (Districts made up on Rate Case Basis.)

Period.	Six per cent on valuation.	Net operating income.	Shortage.	Rate earned (annual basis) P. C.
Month of September, 1920.				
Eastern District.....	\$51,487,000	\$31,506,610	\$19,980,390	3.7
Southern District.....	8,626,000	4,219,327	4,406,673	2.9
Western District.....	49,123,000	39,584,374	9,538,626	4.8
United States.....	\$109,236,000	\$75,310,311	\$33,925,689	4.1
Month of October, 1920.				
Eastern District.....	\$49,659,000	\$36,243,767	\$13,415,233	4.4
Southern District.....	10,321,000	4,882,939	5,438,061	2.8
Western District.....	52,455,000	45,328,841	7,126,159	5.2
United States.....	\$112,435,000	\$86,455,487	\$25,979,513	4.6
Month of November, 1920.				
Eastern District.....	\$42,263,000	\$23,579,056	\$18,683,944	3.3
Southern District.....	10,391,000	3,409,898	6,981,102	2.0
Western District.....	46,632,000	30,752,983	15,879,017	4.0
United States.....	\$99,286,000	\$57,741,937	\$41,544,063	3.5
Three months to November 30, 1920.				
Eastern District.....	\$143,406,000	\$91,329,373	\$52,076,627	3.8
Southern District.....	29,338,000	12,512,164	16,825,836	2.6
Western District.....	148,210,000	115,696,198	32,513,802	4.7
United States.....	\$320,954,000	\$219,507,735	\$101,446,265	4.1

Note.—Data for November, 1920, does not take into account lap-over items growing out of settlements with the United States Railroad Administration, while those for September and October take into account such items.

Turning again to the estimated figures for the four months ending December 31, 1920—and it cannot be too strongly insisted upon that these figures are estimated—the total operating revenue of the railroads for that period amounted to \$2,402,262,015. Taken at 50 per cent, which is the conservative estimate for operation, and allowing the necessary fuel, materials, supplies, taxes, accruals, etc., the railroads were faced with a deficit of \$29,890,409, or a gross deficit of 1.2 per cent. Small wonder, then, that Mr. Atterbury, speaking for the railways in his final talk before the Board, said: "It rests entirely with your Board to determine within the next few days whether this whole situation will drift into chaos and orderly procedure become impossible except at the price of railroad bankruptcy, financial shock and still wider unemployment. The time has come when, if the railways are to be efficiently and economically operated \* \* \* normal conditions of employment and of working conditions must be restored and increased efficiency of labor be secured."

#### To Deal in Fruit Growers' Supplies.

Martinsburg, W. Va., February 21.—[Special.]—The Potomac Fruit & Supply Co. has been organized with a capital stock of \$100,000 to deal in supplies for fruit growers in the Eastern Panhandle. Officers of the company are: M. W. Fuller, Cherry Run, president; W. B. Connell, Martinsburg, secretary and treasurer. These, together with J. L. Phillips of Linden, Va.; Robert Powell of Levels, W. Va., and William Farris, constitute the board of directors.



# European Industry and Trade— Silesian Industry and French Agriculture

By EDWIN C. ECKEL.

In March of this year a popular vote will decide whether the great industrial region of Upper Silesia is to remain German or to become Polish. As we know, the matter has been suggested as one reason for delaying decision on the question of German indemnities; it is held, and, in my opinion, rightly enough, that the possibility of large payments is connected intimately with the retention of this important industrial region. On the other hand, if the vote turns the country over to Poland, it cannot be overruled simply for the purpose of enabling Germany to pay off her debts more quickly, so that it will be well to see just how serious the loss may be.

During the World War the Germans were at all times more keenly alive to the importance of industrial power than were the Allies; they seized the furnaces, mills and mines across the frontiers at the earliest possible moment, and they kept them in operation up to the last day of action. But, in addition, they seem to have made preparations, as we learn now, for changing the base of their own manufacturing operations in case the fortunes of war went against them. Upper Silesia, comparatively safe from attack, was made more important industrially each year of the war.

This fact is brought out sharply by comparative figures of the Silesian production of various minerals and metals during different stages of the war. Some of the more important of these data are reproduced here.

## The Industrial Value of Upper Silesia.

The most striking are those relative to coal and coke, when we consider that a great war was in progress. In 1914, for example, Upper Silesia produced 37,408,740 tons of coal; in 1917 the output had been increased to 43,031,148 tons. The number of coal miners had increased from 104,965 to 150,110. As to coke, the Silesian output was 1,843,119 tons in 1912; by 1918 it was 2,734,958 tons. In spite of the difficulty and cost of new construction during the war, the coke ovens had increased from 2320 to 3032.

Pig-iron tonnage increased likewise from 59,585 tons in 1915 to 75,119 tons in 1917. Steel increased from 8506 tons in 1914 to 36,073 tons in 1917. But Silesia is not the important iron and steel-producing area of Germany; it is one of the important coal regions, and finishing plants of various sorts locate there. The number of workmen employed in plants making wire, nails, tools, etc., rose from 15,322 in 1914 to 30,095 in 1917.

The zinc industry is, next to coal, the serious item in Silesian work, since in normal years about one-sixth of the world's supply comes from that region. In 1915 Silesia produced 419,956 tons of zinc ore, using 8420 miners. In 1917, 10,072 miners were at work, and the total ore output had risen to 490,378 tons.

In addition, there is one of the largest nitrogen plants in the world, located at Chorzow, where 250,000,000 liters of air are daily taken in for the extraction of nitrogen. The chemical industries based on coal-tar products, like the others so far mentioned, increased their output some 50 per cent during the course of the war. And sulphuric acid, the basis of the heavy chemical industries, rose from an output of 176,742 tons in 1915 to 260,166 tons in 1918.

With these facts in view, we can see the financial importance of the decision which will be reached in March; either Germany will retain a very valuable asset or else Poland will be made at one step one of the important industrial countries of Europe.

And a still more important matter, not entirely brought out by output figures, relates to the future. Upper Silesia contains some 166,000,000,000 tons of good coal, so far as our present estimates of reserve tonnage go. This amount is about one-fifth of the total coal in Europe; it is almost as great as the total tonnage credited to the British Isles; it is well over a third of the entire coal reserve of the German Empire of 1914. The country which gains this prize will become perforce a leading industrial power in Europe.

## The Agriculture of France.

It is now possible to give more exact figures regarding certain points of interest in French agriculture than could be done at the

time my November 25 letter was written. And as France will be of importance to our own farmers for many years to come, as market in some lines, as competitor in others, the data now available will be of general service.

First, as regards the importance of agriculture in France, as compared with its standing in other countries among the industrial nations. On this point we have good data, not for very recent years, but for the decade preceding the World War. Census figures for the different countries, taken at various dates, but all roughly comparable and exact enough for our present purposes, give results as follows for the percentage of total working population engaged in agriculture and related pursuits:

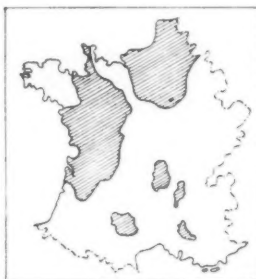
Country.	Percentage of working population engaged in agriculture, forestry and fisheries.
France.....	44%
United States.....	36%
Germany.....	35%
England and Wales.....	8%

The acreage employed for the various crops varies from year to year, though less than in the United States. The following summary gives the approximate percentages, during the typical decade before the World War, of the entire crop area of the year as divided among the different products. It is only approximate, but very close to the truth over a series of years:

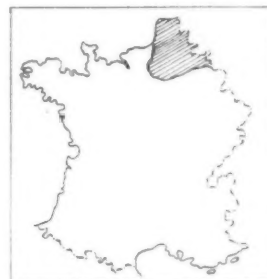
Cereals.....	67%
Grapes.....	8%
Potatoes.....	7%
Hay, etc.....	7%
Market gardens.....	5%
Sugar beets.....	4%
Other crops.....	2%
Total crop area.....	100%

The small maps which have been prepared to accompany this article give the regions which are most important as producers of the various crops. It must be understood, of course, that only the chief areas are given. Wheat, for example, is grown on almost every square mile in France, but its heavy outputs come from the areas indicated by the shading on the appropriate map.

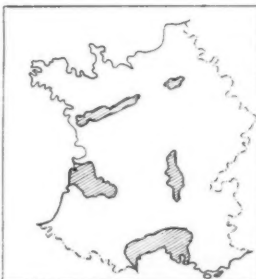
By far the most important single crop in France is wheat, but



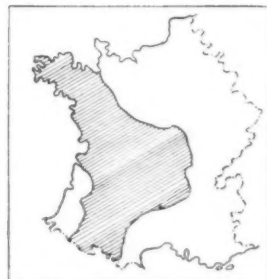
WHEAT



SUGAR BEET



GRAPE



POTATO

the other cereals are also of high importance. Of all the agricultural land in France, almost two-fifths was under cereals in the years preceding the war. As an interesting comparison with other European countries we may state the percentages so utilized:

France .....	39%
Russia .....	60%
Austro-Hungary .....	53%
Germany .....	40%
Belgium .....	37%
United Kingdom.....	16%

The extent to which property in real estate is subdivided in France is well brought out by the following table, giving the results of an inquiry carried out in 1908 by the Ministry of Finances:

Size of holding.	Number of proprietors.	Total extent held hectares.
Less than 1 hectare.....	2,087,831	1,228,597
1 to 10 hectares.....	2,523,713	11,559,342
10 to 40 hectares.....	745,802	14,825,298
40 to 100 hectares.....	118,497	16,270,556
Over 100 hectares.....	29,541	
Totals .....	5,505,464	43,883,793

Further information, more directly to our present purpose, is afforded by the following data dealing with the average size of farming operations in France in the year 1892. No later data on this specific point are known to me:

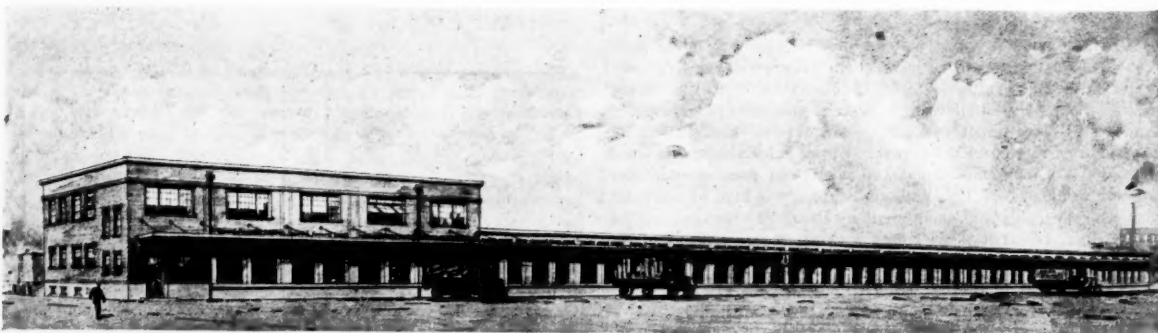
Size of farm.	Average size in hectares.	Percentage of total number.	Percentage of total areas.
Less than 1 hectare.....	0.59	39.2%	2.9%
1 to 10 hectares.....	4.29	45.9%	24.1%
10 to 40 hectares.....	20.13	12.5%	30.0%
More than 40 hectares.....	162.21	2.4%	43.0%

From these figures we can see that the average French farm operation is very small, ranging probably around three hectares, say, seven or acres, in extent. Elsewhere I have used an estimate slightly above this to make some allowance for market garden holdings, which are naturally of very small individual extent, and have assumed that the true average of farm holdings will be in the neighborhood of 10 acres.

### Giant Blackberry May Be Raised South.

Discovery of a giant variety of blackberry in the mountains of the department of Cundinamarca, in the Republic of Colombia, is reported by the United States Department of Agriculture, which has obtained seeds of the plant and has begun extensive experiments to determine the climate in this country that will be most favorable to its cultivation. The berries are said to be about four times the size of the average blackberries in the United States. It is by no means yet assured that the plant can be grown here without its fruit losing some of the peculiar characteristics of its growth in the tropics. The region where it is found is about 5 degrees north of the equator, but it is also 10,000 feet above the sea, this elevation modifying the tropical heat in a manner that is favorable to the berry plant. It is expected that this variety of berry can be most successfully raised in the Southern and Southwestern States of this country and also on the Pacific coast.

### CONTRACT AWARDED FOR NEW FREIGHT DEPOT AT DALLAS.



Reinforced concrete structure to be erected for the Missouri, Kansas and Texas Railway at a cost of \$230,000. Hickey & Montgomery of Dallas, contractors. Plans by A. L. Sparks, architect, under direction of Frank Ringer, chief engineer of the railroad.

### Interstate Cottonseed Crushers' Association Will Meet.

The 1921 annual convention of the Interstate Cottonseed Crushers' Association will be held at the Congress Hotel, Chicago, May 18, 19 and 20. Plans are under way to make it an unusual event in the history of the edible oil milling industry in this country. The association embraces practically the entire industry, including refiners, manufacturers of products and dealers and brokers from the Atlantic to the Pacific, as well as the crude cottonseed and peanut oil mills of the South, with which the organization had its origin.

The trading rules and arbitration system of the association are used by practically every buyer and seller of oil-mill products in this country. Its weighing and inspection service at the chief ports and trading centers is being rapidly extended to meet constantly increased demands.

At the Washington (D. C.) offices of the association its assistant to the president, Louis N. Geldert, manages the publicity bureau, with its recent addition of a weekly market service to members, and including the publication of the Cotton Oil Press, the association's official monthly bulletin. An extensive exhibit of cottonseed and other oil-mill products is maintained at these offices.

The Chicago convention in May will be the first held by the association outside of the South since 1911.

### White River Chamber of Commerce Organized.

Cotter, Ark., February 19—[Special.]—To further the development of the natural resources of the Upper White River country in the Arkansas Ozarks, a White River Chamber of Commerce has lately been organized, which takes in all the towns from Newport to the Missouri-Arkansas line on the north, a distance of nearly 200 miles.

The organization was formed on the conclusion that the interests of the entire upper valley are interlocked and that by concentrated action development and prosperity will come to all sections alike.

T. J. Walbert of the Mount Olive Stave Co. of Batesville was elected president; E. J. Loop, Cotter, first vice-president; A. A. Webber, Batesville, recording secretary; J. H. Hand, Yellville, field secretary and director of publicity. The board of governors elected was as follows: G. E. Yeatman, E. C. Parsons, W. M. Shelby, D. D. Adams, R. L. Berry, W. J. Copp, with three additional members to be selected at the next meeting.

### Fiber Company Resumes Operations.

Asheville, N. C., February 19—[Special.]—The Champion Fiber Co. at Canton, 21 miles west of this city, has resumed practically normal operations, after a period of dullness and inactivity. There are now engaged in various departments about 1000 of the total 1400 normally employed, the tannic-acid department alone being short of orders. Work is being pushed also upon the new paper-mill addition.

# Protection Needed for Cottonseed Oil Industry

IMPOSSIBLE TO CONTINUE IN EXISTENCE IF FORCED TO COMPETE WITH PAUPER PRODUCT OF ORIENT—IMMENSE LOSS TO SOUTHERN FARMERS ALREADY INCURRED.

[Special Correspondence Manufacturers Record.]

Washington, February 14.

The future of the cottonseed-oil industry in America was outlined at a recent hearing before the Ways and Means Committee by representatives of Southern cottonseed crushers, who declared that the industry faced ruin through competition with Oriental oils, which are flooding this country and dominating the market for all vegetable oils, and that unless an effective tariff was adopted to prevent the dumping of foreign oils in America, the industry in this country is doomed.

It was the final and eleventh-hour plea by representatives of an industry which produces 60 per cent of the world's cottonseed oil, with an average annual production of approximately 1,500,000,000 pounds, being greater than the combined production of all other vegetable oils; equal to the farm, small shop and factory production of lard, and nearly equal to the total butter production.

Statements to the effect that there is no immediate need for a protective tariff on American vegetable oils by the United States Tariff Commission in a survey of the cottonseed-oil industry were challenged by the crushers, who declared that the Commission had arrived at this conclusion without reckoning with the fact that foreign vegetable oils are the chief competitors with cottonseed oil.

"The fact, however, is," declared Henry E. Watkins, chairman of the Crude Cottonseed Oil Tariff Committee, in his testimony before the Ways and Means Committee, "that coconut oil and soy-bean oil enter, for almost all purposes, into practical competition with cottonseed oil, and these Oriental oils are being used more and more in the manufacture of lard substitutes and oleomargarine, to the exclusion of cottonseed oil."

A brief in behalf of the Cottonseed Crushers' Associations of Texas, Arkansas, Oklahoma, Alabama, South Carolina, Mississippi, Louisiana, Tennessee, North Carolina, California and Arizona was read into the tariff hearings by Counsel Robert S. Parker for the various State associations, which asked for 19 specific tariff measures, as follows: A duty of five cents per pound on all imported coconut oil; three cents per pound on copra (coconut meats); five cents on crude peanut and six cents on refined peanut oil; four cents on shelled and three cents on unshelled peanuts; five cents per pound on edible olive oil and four cents on nonedible; five cents on crude cottonseed oil; six cents on refined cottonseed oil; five cents on palm oil; five cents on palm kernel oil; three cents on palm kernels, palm nuts or palm fruit; five cents on crude soy-bean oil; six cents on refined soy-bean oil; three cents on soy beans; five cents on Chinese nut oil; three cents on sesame seeds, and five cents per pound on sesame oil.

Any imposed duties less than these, it was declared, will not effectively serve as protection to the edible-oil industry in the United States. "Further, that there is no way to produce cottonseed oil in this country in competition with Oriental oils except behind tariff barriers," Counsel Parker said. "The interests in whose behalf this brief is filed believe in protection and invoke a duty on vegetable oils and oil products for the purpose of preserving an American industry which cannot survive without such protection. Upon the issue of whether these oils and oil products are to be placed upon the dutiable list depends the continued existence of the business of the cottonseed crushers."

In response to questioning of Chairman Fordney of the Ways and Means Committee, who was outspoken in his belief that the vegetable-oil industry should be protected by some sort of tariff, Chairman Watkins of the Crude Cottonseed Oil Tariff Committee declared that while the crude mills themselves were suffering extensive losses, the loss was shared by the farmer. "Due," he said, "to the fact that the mills are getting so little for their crude oil, brought about by this dumping of Oriental oils in the American market, they cannot pay the farmer what it cost to produce the seed, and as a result the farmers in a great many instances are taking their seed back to the farms, using them as fertilizer." This practice, Watkins estimated, represented an economic loss of more than \$200,000,000 this year to the country, basing his esti-

mate on the amount of seed raised and the amounts received by the mills for crushing.

Ten and a half cents is the minimum price at which crude mills can sell their oil and make a profit, the crushers declared, when they were forced to pay \$30 per ton for seed, which was figured as the minimum price at which a farmer could sell and make a fair profit.

Chairman Fordney, in a statement issued at the close of the hearings, stated that little work, if any, would be possible on the new tariff bill between then and March 4, adding that permanent legislation could not be enacted for eight or nine months.

## The Farmer Will Be Wise in Raising Cotton Only Where It Can Be Done at a Profit.

New Orleans, La., February 16—[Special.]—Cut the cotton acreage, counsels the State University Extension Division of Louisiana, in a statement just issued, discussing present prices and cultivation conditions.

If these lands taken out of cotton cultivation, the statement says, are planted in soil-enriching crops and feed crops, the farmers of the State will turn present disaster into future profit.

The statement continues, in part:

"The average yield of cotton in Louisiana since the advent of the boll-weevil has been around one-fourth of a bale an acre. With the present outlook for the price of cotton, and, for that matter, at any price that cotton can be reasonably expected to bring, a yield of only one-fourth of a bale an acre is an assurance of a financial loss in its production. The wise farmer will discontinue the planting of cotton on land that will not produce a good yield. An observance of this rule would make for even a very much greater acreage and reduction than is being advocated.

"If proper measures are taken now, we have an opportunity of turning the apparent disaster that has overtaken the cotton growers into a lasting benefit. It should result in a complete change of our expensive, irrational, one-crop system into sane, safe farm practices that take into consideration not only the immediate gain of money, but tend to leave both the owner and the farm in a better position. In order to meet the present situation and as a foundation for this better system, the following is recommended:

"1. That no cotton be planted upon land that cannot reasonably be expected to yield one-third of a bale an acre. Better plant such land in soil-improving crops or allow it to return to nature until such time as this can be done.

"2. On all other land, make the reduction recommended, and plant the land so reclaimed to soil-improving feed crops."

## Stone-Crushing Plant Placed in Operation.

The Collins Granite Co., Inc., of Danville, Va., has recently completed the erection of a stone-crushing plant with a capacity of about 1000 tons per day. It is located on the main line of the Southern Railway in Caswell county, North Carolina, about 6 miles south of Danville.

In discussing this development, G. R. Collins, president of the company, writes as follows:

"We have bought 23 acres of granite property and have opened a quarry of granite of a superior quality. During the present year it is unlikely that we shall undertake to develop the quarry for anything more than crushed granite. The development includes about 2400 feet of new tracks connecting with the main line of the Southern Railway, capable of taking care of an output of about 20 cars per day. The whole development represents a cost little in excess of \$100,000, and it is expected will take care of the crushed-stone requirements for this section of the country for some time to come. It is a steam-shovel operation, and the plant has been designed to use a minimum amount of labor."



# Steadily Increasing Demand for New Buildings—Past Week Shows Notable Number of Contracts Awarded for Large and Important Structures—Total Over \$5,000,000.

The actual demand for new construction work of all kinds has reached a high level. Definite steps toward meeting this demand are now under way, an illustration of this being the large amount of money involved in contracts awarded and projects for which bids have been requested, as reported in the Construction columns of the MANUFACTURERS RECORD.

For some months building operations have been slowly reviving, and signs now are not lacking that a resumption of building on a fair and profitable basis is really at hand. It is evident from reports of the last few weeks especially, and the period since the first of the year, that the volume of new construction work will continue to increase steadily as the summer months draw near.

During a five-day period, ending on February 18, announcements made in the Construction Department of the MANUFACTURERS RECORD show that contracts were awarded for construction work of all kinds entailing an expenditure of approximately \$5,380,000, and that new projects were announced for which plans have been prepared or are in course of preparation by architects, and for which bids will be asked within the next few months, amounted to approximately \$5,800,000. These activities are not confined to any one section or any single class of construction. They are widespread in territory and in character. Predominant among the activities, however, is the great number of dwellings, school and bank buildings, churches and similar structures. The announcements of contracts awarded included three bank buildings costing \$480,000; dwellings, costing \$302,100; apartment-houses, costing \$215,000; school buildings, costing \$310,000, and church buildings, costing \$199,490. Similarly, sewers and drainage projects costing \$420,910 were finally awarded, as were road, paving and bridge projects costing \$195,500.

Many contracts for projects of a miscellaneous character were awarded during the five-day period, the most important in view of the amount of money involved being that for laying a submarine cable from Key West to Cuba, at a cost estimated at \$2,000,000. Plans were announced for construction by day work of a prison at Speigner, Ala., to cost about \$500,000, and contract was awarded for a freight depot at Dallas, Tex., which will entail an expenditure of more than \$230,000.

Many important bids for construction work just announced as having plans under way or complete will be awarded before March 15, and many more bids will be awarded before the last of April, so that the volume of new construction under way in the early summer in the Southern States will be large and impressive. The projects planned cover practically every kind of construction, but the number of new purely industrial construction activities of note is small.

Many paving contracts will be awarded within the next few weeks, and plans and specifications are being prepared for hundreds of miles of roadway in different sections. Similarly, bond issues are being voted to provide for water-works extensions and improvements, increased sewer facilities and municipal buildings. Fraternal organizations will erect structures costing hundreds of thousands of dollars in the aggregate if contracts are awarded for projects on which bids have been asked within the past few weeks. Many of these structures are imposing and costly. A goodly number of school buildings will be erected if plans are fulfilled, and these in large part embody everything that is modern and up to date in structures of this character, and will necessitate the expenditure of large sums of money, not only in construction, but for equipment and fittings. In addition to the large number of dwellings for which plans are being prepared, apartment-houses and hotels are conspicuous by their number and the amount of money involved in their erection.

## CONTRACTS AWARDED.

Bridge, Forsyth, Mo.	\$72,000
Apartment-house, St. Louis, Mo.	75,000
Store and apartment-house, Baltimore, Md.	25,000
Residence, Ancherst, Va.	5,000
Masonic temple, Quincy, Fla.	50,000
Hotel, Orlando, Fla.	350,000
Masonic temple, Knoxville, Tenn.	100,000
Church, Oklahoma City, Okla.	45,000
Houses (42), Pikeville, Ky.	80,000
Dwelling, St. Louis, Mo.	12,000
Building, Louisville, Ky.	300,000

Bathhouses, Birmingham, Ala.	5,000
Tire equipment, Joplin, Mo.	5,000
Paving, Fort Worth, Tex.	500,000
Bridges, El Reno, Okla.	50,000
Roads, Hartsville, Mo.	27,000
Roads, Independence, Mo.	50,000
Dwelling, St. Louis, Mo.	70,000
Lodge, Sapulpa, Okla.	100,000
Church, Little Rock, Ark.	22,000
Grandstand, Muskogee, Okla.	21,000
Apartment-house, Muskogee, Okla.	15,000
Hospital, Kansas City, Mo.	250,000
Residence, East Bradford, Va.	5,000
Residences, Oklahoma City, Okla.	7,000
Club, Montgomery, Ala.	5,000
Lodge, Charlotte, N. C.	250,000
Hotel, Miami, Fla.	100,000
School, Pensacola, Fla.	30,000
Library and auditorium, Amarillo, Tex.	15,000
Bridges, Orangeburg, S. C.	100,000
Turpentine plant, Register, Ga.	12,000
Fraternal, Springfield, Mo.	200,000
Warehouse, Baton Rouge, La.	70,000
Dwellings (2), Tampa, Fla.	12,000
Dwellings, Quitway, Ga.	15,000
Dwelling, Macon, Ga.	25,000
Storehouse, Louisville, Ky.	20,000
Store, Heber Springs, Ark.	8,000
School, Paducah, Ky.	95,000
Apartment-house, Louisville, Ky.	80,000
Dwelling, Baltimore, Md.	12,000
Church, Cuero, Tex.	30,000
Residence, Canton, Ga.	7,000
Bank addition, Bristol, Va.	19,000
Market, Miami, Fla.	20,000
Apartment-house, Fairmont, W. Va.	20,000
Dwelling, Tampa, Fla.	7,000
Store, Fairmont, W. Va.	15,000
Apartment, Dallas, Tex.	8,500
Residence, Dallas, Tex.	5,000
Dwelling, Dallas, Tex.	12,000
Dwellings (4), Dallas, Tex.	41,000
Stores, Gastonia, N. C.	40,000
Road work, Taylor county, West Virginia.	100,000
Factory, Crisfield, Md.	20,000
Hydro-electric plant, Greer, S. C.	1,000
Lodge, Fairfax, Okla.	5,000
Church, Brunswick, Md.	20,000
Residence, Dallas, Tex.	12,000
Residence, Winston-Salem, N. C.	8,000
Church, Washington, D. C.	50,000
Residences (5), Dallas, Tex.	7,000
Office building, Dallas, Tex.	10,000
Paving, Munroe, N. C.	150,000
Bridge, railroad, Bowling Green, Ky.	100,000
Theater, Annapolis, Md.	20,000
Residences (3), Oklahoma City	15,000
Store and apartment-house, Louisville, Ky.	25,000
Residences (4), Perry, Okla.	15,000
School, Winchester, Ky.	100,000
Hotel, Hot Springs, Va.	1,000
High school, Glen Jean, W. Va.	250,000
Hotel, San Antonio, Tex.	25,000
Church, St. Petersburg, Fla.	5,000
Total	\$5,761,000

## CONTRACTS TO BE AWARDED

Dwellings—			
Brenttown, Fla.	\$10,000	Baltimore, Md.	12,000
St. Louis, Mo.	19,000	Charleston, W. Va.	20,000
Kirkwood, Mo.	15,000	Norfolk, Va.	25,000
Baltimore, Md.	25,000		89,000
San Antonio, Tex.	25,000	Fraternal and Clubhouses—	
Miami, Fla.	15,000	El Paso, Tex.	\$72,000
Jacksonville, Fla.	6,000	Jacksonville, Fla.	\$82,000
Tampa, Fla.	12,000	Washington, D. C.	7,000
Montgomery, Ala.	6,000	Sapulpa, Okla.	2,000
Atlanta, Ga.	15,000		92,000
Canton, Ga.	20,000	Roads, Paving and Bridges—	
Whiting, W. Va.	21,000	Coleman, Tex.	\$10,000
Richmond, Va.	56,000	Rutherford, N. C.	10,000
Tuscaloosa, Ala.	30,000	Birmingham, Ala.	11,000
New Orleans, La.	17,000	Perry, Okla.	25,000
	\$302,100	Buckingham, W. Va.	10,000
Apartment-houses—			\$105,500
Birmingham, Ala.	\$18,000	Sewers and Drainage Projects—	
Louisville, Ky.	150,000	San Antonio, Tex.	\$10,000
Nashville, Tenn.	32,000	Sarasota, Fla.	60,000
Baltimore, Md.	17,000	Oneco, Manatee county, Fla.	37,000
	\$215,000	Marlinsburg, W. Va.	27,000
Banking Buildings—		Houston, Tex.	200,000
Atlanta, Ga.	\$250,000		\$420,910
Gasaway, W. Va.	30,000	Miscellaneous—	
Beekley, W. Va.	200,000	Freight depot, Dallas, Tex.	\$220,000
	\$480,000	Coal terminal, Cordova, Ala.	70,000
Church Buildings—		Printing plant, Galveston, Tex.	10,000
Edinburgh, Tex.	\$20,000	Store room, Miami, Fla.	10,000
St. Louis, Mo.	50,000	Picture parlor, Le Funt, Okla.	15,000
Sapulpa, Okla.	21,000	Warehouse, Frederick, Md.	47,000
Fort Mill, S. C.	18,000	Roundhouse, Savannah, Ga.	150,000
Ponca City, Okla.	60,000	Laundry, Atlanta, Ga.	15,000
Baltimore, Md.	30,000	Library, Brooklyn, Md.	50,000
	\$199,490	Submarine cable, Key West to Cuba.	2,000,000
Schools—			\$3,072,000
Imman, W. Va.	\$50,000		
Washington, D. C.	20,000		
Thyatira, Miss.	10,000		
Lake City, Fla.	60,000		
	\$310,000		
Store Buildings—			
Columbus, Ga.	\$7,000		
Tampa, Fla.	25,000		

February 24, 1921.

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# Wonders of the Everglades Drainage Work of Florida

By JOHN J. O'BRIEN, President Moore Haven & Clewiston Railway, Moore Haven, Fla.

You have in several instances given publicity to the reclamation work proceeding in the Florida Everglades. It is proper and right that a journal as broad and comprehensive as yours, and particularly covering the entire South, should awaken to the fact that the great Everglades drainage project is one which should be placed before this nation in all its real grandeur and might. With the thought that you will look into the work which is progressing far down here in these 'Glades, I am writing this letter, hoping by presenting some of the things I see after five years' residence here, in the heart of the Everglades, that you will later properly present to your public the wonderful project.

1. Do you realize just what the drainage of the Florida Everglades will mean?
2. Do you realize how close is the realization of drainage, with all it entails?
3. Do you realize the nature of the soil in the Florida Everglades and what it will mean in actual produce when tilled?
4. Have you ever thought to compare this great project with other drainage and irrigation projects having for their object the reclamation of great bodies of land?

I ask these four questions with the thought that you will either answer them in person or solicit answers from some of your readers who may have looked into such comparisons before.

I shall answer the questions in this letter from my viewpoint, and thus give you the future of the great project as it appears to me.

First—The completion of this drainage work will make available about 3,372,000 acres of muck land. Do these figures bring forth thought? One acre of this muck land in the sections already drained and farmed will pasture from three to five head of cattle to the acre the year 'round. It is estimated that an acre of this muck land will yield 20 to 30 tons of sugar-cane. Two staple crops a year can be grown on these muck lands and on small farms; it is not unusual for three crops a year to be grown. If you stop to consider, these figures are astounding. The story of such a project, if it were properly written, would stir the world. If such a drainage work were in progress anywhere else in the world, the eyes of the world would be upon it. The engineer who would have such a project under his care in other countries would be an international character. How many of your readers know of the quiet little man who is known as the chief drainage engineer of the Internal Improvement Board of the State of Florida? F. C. Elliott, the engineer of this project, has brought the Everglades from a morass to a point where the dream of its enthusiasts is soon to be realized. The world will some time write of him and his work. Why not stir the world up now to the great project and the man who is putting it through?

I venture briefly into question two when I speak of realization of this dream of a drained Everglades. Do you know that a great migration has started from the Middle West and Far West to the Florida Everglades? Weekly excursions are operating out of Kansas City to the 'Glades, bringing in hundreds of the best and wealthiest farmers of the West. Do you realize that more than 15,000 acres of land are in cultivation or going into cultivation this coming year along the south, east and west shores of Lake Okeechobee, "the liquid heart of Florida"? Do your readers know that here on the southern shore of this great lake, the second largest in the United States, is a town of 1500 people, with paved streets, a municipal electric and water system, with a back country well developed, and that all of this has sprung out of the raw jungles in five years? It is difficult to write of the progress of this development. I am now building a railroad over the muck soil east of this town to another new town just starting on the southern shore of the lake. Within a few years this road will without doubt extend on to the east coast of Florida, thus connecting the east and west coast of this peninsula through the heart of the greatest body of the richest land in the world. It is hard to realize that rock roads are building across these 'Glades, where a few years ago unscrupulous land men boated their pros-

pects to the land they were selling. It was this scandal, connected with the early days of the drainage work, which has been the chief factor in keeping the project from the recognition it deserves. It was this scandal also which has been responsible for the great project attaining its present state of development without much publicity. Quietly, and with even Floridians ignorant of the progress being made, the drainage work has crept up the hill, reached the summit, and from now on can coast downhill to a successful conclusion. All Florida is now awake to the great work, and the rest of the nation is beginning to stare into the 'Glades of South Florida.

Answering the third question, I will quote from Senate Document No. 89, Sixty-second Congress. Page 175 shows this analyses of Everglades muck soil: Lime, 2.25 per cent; potash, .15 per cent; phosphoric acid, .19 per cent, and nitrogen, 3.16 per cent. This reads like the analysis of a commercial fertilizer, yet it is just the average of a sample of muck soil, and one which can be duplicated on millions of acres in the Everglades. In the same pamphlet or Senate document you will find on page 79 Dr. Wiley's statement of the Everglades. He concludes his study thus: "There is practically no other body of land in the world which presents such remarkable possibilities of development as the muck lands bordering the southern shores of Lake Okeechobee. With a depth of soil averaging perhaps eight feet and an extent of nearly half a million acres, with a surface almost absolutely level, it affords promise of development which reaches beyond the limits of prophecy." His prediction is of the section just south of the lake. It will hold good for the entire Everglades as drainage is perfected.

In answering question four, I do so briefly, and only as a layman with little data at hand to make comparisons. Some of the engineering brethren, who must devour your journal with the same eagerness with which we read it, can take this up for us and carry it to a better conclusion. However, I shall touch briefly on the irrigation projects of Egypt in order to show what we can expect in the Everglades. The entire acreage of land cultivable along the Nile is in round figures 6,000,000 acres. Only 2,000,000 acres are cultivable in the summer because of lack of water. In flood period only 1,500,000 acres are in cultivation, and in winter the maximum of 4,300,000 acres is reached. To attain these results on this reclaimed land by irrigation more than \$20,000,000 had been spent by the British in a short period preceding 1907. The Assuan dam cost \$10,000,000, while the down-river works cost \$1,500,000. These expenditures take no cognizance of the untold millions spent during the entire history of Egypt. On this reclaimed acreage are more than 1,153,000 separate farmers. In 1908 more than \$100,000,000 worth of crops were raised on this acreage. Egypt was at that time the third cotton producer of the world.

The Florida Everglades will open up 3,000,000 and more acres of land, said by all experts who have seen the soil to be the richest in the world. With a growing season 365 days long and a wonderful seasonal distribution of rainfall, what man can predict the result from this great reclamation project?

What will be the population of these 'Glades when the project is complete? The Chenab Canal, the largest irrigation project in India, was started in 1889. It was designed to irrigate 1,250,000 acres of land. In a few years there were 792,000 colonists farming in the lands which had formerly been waste lands.

Holland supports a vast population on its lowlands. This population, which produces most of the wealth of a nation, is farming only a little more than twice the acreage of the Florida Everglades.

The city of Covington, Ky., recently awarded contract to the Worthington Pump and Machinery Corporation of Cincinnati, O., for the installation of one 28x54x80x24x48 vertical triple expansion crank and flywheel condensing pumping engine, with a capacity of 10,000,000 gallons every 24 hours against a head of 378.1 feet. The price was \$196,000 for the pump, to be erected upon foundation in the present pumphouse of the city.

## THE CARBON-BLACK INDUSTRY.

### Its Importance in the Manufacture of Printing Ink and Other Products.

By A. F. KITCHEL, Assistant Secretary National Gas Products Association.

Various articles have recently appeared in the daily press with reference to the situation which is now confronting the producers of carbon black in this country, and we believe it will be of interest to have this matter thoroughly explained in detail, so that a true conception may be had of the facts in the case.

Carbon black is the name commercially applied to an amorphous form of soft carbon produced by the combustion of natural gas. It must not be confused with lampblack, which is a black manufactured by the burning of oil. As a matter of fact, carbon black and lampblack are distinct products, differing from each other in molecular structure, tinctorial strength and other properties, and for the most part in their industrial uses as well. The distinct qualities of the natural gas product, carbon black, are its lightness and fineness, freedom from hard or gritty particles, miscibility in oil, intensity of color and remarkable coloring power when mixed with oils or other substances. No other black possesses this combination of properties. Carbon black is made only from natural gas. It cannot be commercially manufactured from any other substance. Theoretically, no doubt, it could be made from illuminating gas, but this would be impossible as a commercial operation on account of the low yield and prohibitive cost.

The business of manufacturing carbon black from natural gas is not an experiment, but an established industry which has been conducted in the United States for 40 years or more. Its origin and growth have been coincident with the coming into general use of the modern printing press, requiring an abundant supply of ink adapted to rapid presswork. Carbon black, or gas black, is today a staple commodity as well known to the many arts and industries which depend upon it as are aniline dyes or linseed oil.

There are all together some 40 carbon-black factories in this country, located for the most part in regions remote from centers of population, and distributed among the States of Pennsylvania, West Virginia, Kentucky, Louisiana, Montana and Wyoming. These factories, with the wells and pipe lines that supply them, and the gasoline plants operated therewith, represent an investment of upwards of \$25,000,000. Carbon black ranks among the most useful of natural-gas products. Indeed, its uses are such that it may without exaggeration be said to minister in some form to the convenience and comfort of every citizen. In point of time, its universal use was primarily connected with the manufacture of newspaper inks. Such inks are made by the admixture of carbon black and certain oils in the approximate proportion of one pound of black to eight pounds of oil. The resulting nine pounds of ink is sufficient to print approximately 2250 copies of the average newspaper.

The modern rotary press, which has come into general use during recent years, is now capable of 200,000 pages per hour, or over 50 per second. Manifestly, the ink essential for operations of such rapidity must flow freely, possess great covering power and make an instantaneous and legible impression. The National Association of Printing Ink Makers, which comprises most of the printing-ink trade of the United States, and is thus in a position to speak with authority, is responsible for the statement that without carbon black "it would be impossible to continue the supply of ink requisite for the printing of newspapers." Mr. Ruxton, its president, himself a well-known ink manufacturer, says: "In the manufacture of newspaper inks carbon black made from natural gas is an essential ingredient. No satisfactory substitute is available. Any restriction or curtailment of the output of carbon black, therefore, presents the gravest cause for apprehension, not only to the ink manufacturers, but to the publishers of newspapers and to the entire reading public."

Carbon black is also a universal ingredient in carbon papers, typewriter ribbons and duplicating equipment.

Of great importance during the last seven or eight years has been the development of the use of carbon black in the manufacture of automobile tires, both solid and pneumatic. The great majority of the better class of tires today carry black treads, and in the manufacture of these tires millions of pounds of carbon black is employed. It is used, not for the sake of its color, but

because it adds to the toughness and resiliency of the rubber, giving better traction and much longer mileage.

Other commodities in which carbon black is an ingredient are paint, varnish, stove polish, crayons, waterproof coverings, cement colorings, composition goods and paper.

The carbon-black industry adds appreciably to the supply of high-gravity gasoline. Wherever practical, the factories are now equipped with absorption plants to extract every drop of available gasoline from the raw gas. Only the residue of gas remaining after such extraction is consumed in black production; thus several million gallons of gasoline are added yearly to the nation's supply as an incident to carbon-black manufacture. In most instances the recovery of this gasoline would be otherwise impossible on account of the limited local demand and consequent inability to market the gas, after gasoline extraction, for other purposes. The gasoline so produced, according to the United States Geological Survey, "represents a contribution to the gasoline supply of the country of far greater importance than its statistical position would indicate. On the one hand, it represents a production of a type of gasoline that will fulfill the rigid requirements of motor fuel for aeroplanes in high-altitude duty, and also a type of high-gravity material that will blend with low-gravity naphthas to produce a desirable fuel for ordinary motors. On the other hand, the production of natural-gas gasoline represents true conservation."

The entire process is the most efficient that 40 years of experiments and experience have been able to devise. The whole industrial value of carbon black lies in its unique form and properties. It is possible to increase the yield of more carbon from gas, many methods of doing so having been devised, but all have thus far proved a failure, because they obtained quantity only at the sacrifice of the qualities on which commercial value depends.

The carbon-black companies are naturally vitally interested in the conservation of natural gas, upon which the continuance of their business depends. There has recently been widely published under authority of the Bureau of Mines a series of articles on the manufacture of this material. Nowhere is it suggested that any more efficient process has been developed or exists. If our process was obsolete or antiquated, or had been superseded by more efficient methods, is it probable that the Bureau of Mines would have suppressed or concealed the fact?

The National Association of Printing Ink Makers, in recent resolutions opposing any undue legislation against the use of natural gas for the manufacture of carbon black, states that "we deem it unpatriotic for any one or group of States of our country to restrict their natural resources to the exclusion of the advancement of the rest of the Union, as were such a spirit pursued the State of Maine might prevent its wood resources from being used for the manufacture of paper, or coal-producing States prevent their coal from being used in other localities."

Other trade organizations are now taking up the subject, and will doubtless protest against the proposed prohibition or serious curtailment of this industry in the other States.

All that the carbon-black manufacturers ask is the right to continue reasonable use of gas from their own wells to operate their factories and the right to buy gas in the open market in fair competition with other industrial users.

### Plan Pipe Line Extensions.

Oklahoma City, Okla., February 21—[Special.]—Representatives of the Ozark Pipe Line Co., formerly the Yarbola Pipe Line Co., recently have made surveys preparatory to an extension of the company's trunk line from its pumping station east of Waurika to a pumping station of the Empire Pipe Line Co. west of Waurika. This connection will enable the Ozark to get North Texas oil, it is announced. It is rumored that the Ozark plans to lay a line also from Waurika to the Duncan pool in the western part of Stephens county.

Another important bit of information coming from the south side is that the Oklahoma, New Mexico & Pacific Railway Co., owned principally by John Ringling, the circus king, is soon to extend its Ardmore-Ringling line to Waurika, and rumors have it that Ringling has still larger enterprises than that in mind. The late Jake L. Hamon of Ardmore was general manager of this company.



# Mutual Insurance for Latin American Trade

PROVIDES PROTECTION AT LOWEST NET COST—OFFICERS AND DIRECTORS RECOGNIZED AS MEN OF HIGH STANDING IN BUSINESS WORLD.

By THOMAS EWING DABNEY, New Orleans.

One of the greatest obstacles to our foreign trade, especially with Latin America, has been the question of credit. The ledger experience of large enterprises that have dug into the export business, and have known what they were about, shows that foreign-trade credits are no more risky than domestic credits. But to beginners in foreign trade, distance lends terror to the view. Furthermore, American banks have not felt themselves justified in discounting foreign paper without security, and the dead capital tied up in accounts that were perfectly good restricted the extension of the business.

Now a system has been devised, which, in the opinion of those who worked it out, will overcome this obstacle.

It is a mutual insurance system, operated without profit, under which every foreign account that is a good risk is protected, just as your house is covered against fire and your automobile against theft. The credit standing of foreign importers is ascertained by the headquarters, which has agents in all parts of the world, just as the standing of firms and individuals is listed in this country.

This foreign-trade insurance is different from ordinary insurance, in that the full value is paid in the event of a loss. With this protection, it is obvious that any American exporter can make shipments with absolute confidence, take the protected drafts to his bank and get his money immediately for increasing his business.

The American Manufacturers' Foreign Credit Insurance Exchange is the name of the organization that has been created to put foreign trade on this safe basis. It is the result of the movement started several years ago by the Illinois Manufacturers' Association, and the plan has been three years in the making; many foreign-trade experts have been at work on it and on compiling and rating credits in various world markets.

Officers are:

**President**—George R. Meyercord, president of the Meyercord Company of Chicago; first vice-president of the Illinois Manufacturers' Association.

**Treasurer**—Samuel M. Hastings, president of the Computing Scale Co. of America; ex-president of the Illinois Manufacturers' Association.

**Secretary**—John M. Glenn, secretary Illinois Manufacturers' Association; secretary National Conference State Manufacturers' Association.

The other directors are:

**H. H. Merrick**, president Great Lakes Trust Co. of Chicago; president Mississippi Valley Association, ex-president Chicago Chamber of Commerce, ex-president Chicago Association Credit Men.

**Edward N. Hurley**, president Hurley Machine Co. of Chicago; ex chairman United States Shipping Board.

General offices are in the Chamber of Commerce Building, Chicago. **John B. Benson** is general manager; **C. C. Walts**, credit manager; **H. M. McConnell**, counsel.

The plan, in its inception, is thus a Mississippi Valley proposition, and the encouragement to Valley commerce and Gulf port development will be especially important, because the business of the Valley and the Gulf is the most undeveloped. But the exchange will not be limited to the Valley. Any American manufacturer or exporter who desires to enter will be eligible to join. No insurance is sold to nonmembers.

Organized on the mutual plan, the exchange will safeguard members from loss by pooling responsibility. In other words, they carry their own insurance—insurance that can be discounted by banks—and the only expenses are those of administration. There is no profit for the "company." Consequently, rates are lower.

A "market guide" is printed and kept revised monthly. This is distributed to members of the exchange only. The guide gives

the names of the importers in the various foreign markets, their business, the maximum risk the exchange believes they are good for, and the basic rate. The rate ranges from 1 per cent to  $1\frac{1}{4}$  per cent for sight draft with bill of lading attached; the larger the credit rating, the lower the rate. Merchants about whom sufficient satisfactory information has not been secured to quote a rate are indicated, and those who are not insurable at all are also pointed out.

The American member of the exchange takes out a master policy, which gives him a cover on all export business, as he telegraphs his shipments to the headquarters. The premium deposit paid does not go into the treasury of any person or corporation, during the time of insurance, but remains the property of the manufacturer or firm in question, and it can be withdrawn at will with proper deductions to cover the service already given.

If an exporter receives an order from a firm about which satisfactory information had not been secured when the directory was printed, he telegraphs headquarters and asks if sufficient data has since been received to quote a rate. Of course, no business man would care to ship to a firm that is classed as noninsurable and whose standing is a matter of doubt.

Accounts can be insured up to six months on draft and on open account, and the maximum rate is  $2\frac{1}{4}$  per cent. The rates for the different periods have been worked out as follows in accordance with the basic rate, which, as already stated, is the cover of sight draft with bill of lading attached:

## FOREIGN TRADE INSURANCE RATES.

The rates for a greater length of time are:

When basic rate is	Time drafts.			Open account.		
	30 days or less.	4 months.	6 months.	3 months.	4 months.	6 months.
Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1 .....	$1\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$
$1\frac{1}{4}$ .....	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{3}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
$1\frac{3}{4}$ .....	$1\frac{1}{2}$	$1\frac{3}{4}$	2	$1\frac{3}{4}$	2	$2\frac{1}{4}$

Thus our export interests can finance and insure foreign trade for six months at a maximum of  $2\frac{1}{4}$  per cent on open account, and of 2 per cent on a time-draft basis. The average discount for cash within 10 days on domestic business is 2 per cent. In other words, 2 per cent interest is charged for 10 days. And the rate for foreign trade is only 2 per cent or  $2\frac{1}{4}$  per cent for six months, a period 18 times longer. If the exporters add a 6 or 8 per cent interest to their charge, they will be financing the foreign importers at the current local rates or lower, for in certain markets, especially Latin America, money costs 12 per cent up, and 24 per cent is not uncommon.

The "market guide" is obviously a great help to American exporters, for it shows who should be avoided and who with safety may be approached. Even without the insurance, this service would be of great value.

Another service is rendered by printing a monthly record of the business done by exchange members with foreign merchants. This is sent every member of the exchange. Both the members and the foreign merchants are indicated by key numbers; the latter are, of course, known to all, but the former are known only to the individuals in question. With each transaction is noted whatever trouble may have developed on the shipment. This is a further check on the honesty of the foreign importer, and it is also a guide to American exporters in certain of their problems.

Thus if the transactions of foreign buyer 98-A show repeated reports of "shortage" in shipments received from various exporters, repeated kicks on quality and packing and persistent claims for refunds for alleged damages, he is clearly proven dishonest, and exporters can govern themselves accordingly. If the transactions of foreign buyer 275-B shows no kicks, he is obviously a fair man and is getting good service, and when he does kick, it will be because he has a just claim. If against the

shipments of American exporter 746 there are complaints about packing, quality, shortage, etc., by various foreign importers, and the same importers do not make such complaints against other exporters, the American in question is clearly at fault, and he will change his methods if he expects to continue doing business.

The "market guide" now contains ratings on merchants in Mexico, Central America, South America, West Indies, Australasia, Africa, the Orient, Holland and the Scandinavian countries. New names are constantly being added, it is stated, new districts being included and new countries being classified according to the trade possibilities and the reliability of its merchants.

In summary, this insurance exchange gives its members insurance on foreign credits at net cost. The savings, or unused premiums, due to minimized losses, are refunded to its members instead of going into the pockets of stockholders.

It reduces guesswork in passing on credits, and this means insurance at lowest cost.

It shows to exporters the market, through the "guide," and gives them potential distributors whose reliability is known.

It provides a channel through which trade information of the broadest kind will be available.

It will inspire foreign-trade confidence, help overcome the inertia of American manufacturers, and provide a channel for building a constantly growing, permanent and profitable trade with foreign countries, which will keep our wheels of industry whirling steadily.

### Texas Oil Men Look for Rise in Price.

Austin, Tex., February 21—[Special.]—If the present movement for the curtailment of crude-oil production in the North Central Texas fields continues in force many weeks, the price of the product will be forced upward to something like the figure it was before the recent slump began, it is believed by oil operators. Very few new drilling contracts are being made, and there is a general demoralization of the industry in all of its phases.

There has been a reduction of about 12,000 barrels in the daily production of the North Central Texas fields since February 1. There is an average daily production in the territory today of something more than 206,000 barrels, compared with a production of more than 218,000 barrels at the beginning of the month.

Two 18-barrel producers, each from the 700-foot shallow sand in the Iowa Park field, have been finished by C. F. Spencer and others, both tests being drilled on the Watkins lease.

In the Electra field a 40-barrel well, drilled by the Gladiolus Oil Co., and a 35-barrel producer, drilled by the Texas-Virgin Association, are the only completions of the week. The former well came in from the 840-foot sand and the latter from a depth of 1400 feet.

All of the refineries in Texas are still in full operation. Plans also are on foot for the construction of new refineries in different parts of the State.

It is expected that there will be another cut made in the price of the heavy crude oil of the coastal fields. It will not be surprising if heavy crude is reduced to \$1 a barrel within the next few weeks. One thing may prevent this being done, and that is, a big curtailment of the importation of Mexican crude.

### \$260,000 Reservoir Placed in Operation.

Perry, Okla., February 16—[Special.]—This city has at last completed at a cost of more than \$260,000 a new reservoir and water-treating plant which insures an ample supply for years. The big dam, impounding about 100,000,000 gallons, has been completed. The water is going over the top. Filters are in operation and the water is chlorinated, making it safe for all domestic purposes. Three of the four pumps have been set, and the fourth is awaiting repairs to the motor. Little remains to be done but to beautify the grounds and to finish the floors in the power-house.

John Alderson was contractor for reservoir, Roberts Filter Manufacturing Co. of Philadelphia installed the filters and the Busch-Sulzer Diesel Engine Co. of St. Louis re-equipped the power plant. Black & Vestal of Kansas City, Mo., were engineers in charge.

## WOULD ELIMINATE WASTE.

### Hoover, as President of Engineering Societies, Names Investigating Committee.

Elimination of waste in industry through co-operation among the industries and with the Government is the plan outlined before a convention of engineers and technologists by Herbert Hoover last week. Mr. Hoover said that it was not possible to expect that all industry can be so stabilized as to do its capital construction in periods of depression in commodity demands, but that he believed that such a plan might be applied with the co-operation above suggested to the railway, telephone, telegraph, power supplies and other utilities of the country, as well as to the expenditures upon our State, municipal and national public works.

"We have productive capacity wasted today," said Mr. Hoover, "that if properly used would improve the housing conditions of our entire people to the level enjoyed by only 50 per cent of them now."

"Everyone knows also that for our normal productivity our transportation facilities are today inadequate. We know that we are insufficiently housed, insufficiently equipped in our public roads and our public utilities; that we need an entire revision of our power supply; that we need expansion of our waterways, and yet armies of idle men are walking the streets. The reasons why this occurs are not far to seek, in that it is at times of high productivity that capital is most easily obtained. It is then that the necessity of increased equipment most impresses men's minds, and it is the high hopes of those periods that lead them into the adventure of expansion."

Mr. Hoover, as president of the American Council of the Federated American Engineering Societies, announced the appointment of a committee on elimination of waste in industry. The appointment of this committee, announced Mr. Hoover, marks the beginning of what is officially styled by this council as a great national assay of waste, in which from 100,000 to 200,000 engineers functioning through the council will attempt to locate the weakness in the country's production system. It is proposed to organize the engineers of the country on a territorial basis, each State having an engineering organization, with the American Engineering Council the executive organ of all.

### Gasoline Consumption by States.

Complete returns from 15 States which have oil inspection show a total gasoline consumption by these States in 1920 of 1,245,770,511 gallons, according to figures compiled by the American Petroleum Institute. The largest consumption reported was by Ohio, which used 273,411,650 gallons. Missouri was second with 156,239,750 gallons. The following table gives the results of the American Petroleum Institute's canvass:

State.	Gasoline consumed, gallons.
Alabama .....	48,000,000
Arkansas .....	23,911,079
Colorado .....	51,452,244
Florida .....	51,755,278
Kansas .....	117,090,809
Minnesota .....	114,922,700
Missouri .....	156,239,750
Nebraska .....	82,361,100
North Carolina .....	73,960,000
Ohio .....	273,411,650
Oklahoma .....	62,991,167
Oregon .....	4,322,386
South Carolina .....	41,255,067
South Dakota .....	41,000,000
Tennessee .....	57,811,190
Total .....	1,245,770,511

\*Includes 2,721,717 gallons of distillate.

### Progress in Mexican Oil Fields.

Tampico, Mexico, February 21—[Special.]—According to T. R. Batte, Jr., general manager of the Agwi Oil Co., subsidiary of the Atlantic, Gulf & West Indies Steamship Co., the construction of the company's 50,000-barrel pump station at Amatlan has been started. The first 10,000-barrel unit of the company's topping plant at Tecamate will be completed by March 1, according to Dr. E. R. Lederer, who is in charge of the work. Two more 10,000-barrel units will be added during the present year.

# Crop Diversification Movement in Alabama

[Special Correspondence Manufacturers Record.]

Birmingham, Ala., February 15.

At the instance of a number of Alabama business men, a meeting was held in Birmingham on February 14, preliminary to the organization of a movement for crop diversification, at which Mr. A. R. Kroh was asked to deliver an address.

Among those in attendance were Judge B. M. Allen, one of the prominent agriculturists of the State; J. O. Thompson, one of the largest cotton producers of Alabama; Robert L. Newman, State distributor for the Oldsmobile Company, and leading bankers and merchants.

Mr. Thompson, as chairman of the meeting, said that the bankers and business men must see to it that the cotton grower was financed, not only to produce, but to hold his cotton so that the market might not be controlled by speculators. The American Cotton Growers' Association lent such aid to the farmer by control of a selling organization that it added in one year a billion dollars to the deposits of the South, which meant an equal purchasing power by the farmer. With such an organization now it would be possible to provide adequate warehouse facilities at Mobile which would save enormous sums to the farmer. There are 200,000 bales now lying out of doors in Alabama suffering damage that will amount to \$20 per bale, or \$4,000,000 loss, sufficient to build a State warehouse system. One of the most important things for Alabama is to push through the Port Amendment for Mobile, and then the farmer must return to the pre-Civil War basis of producing all the things that he needs, so that his cotton will be a surplus crop. In this connection, he recalled the campaign made some years ago by the International Harvester Company to awaken interest in diversification as a means of improving the financial position of the Southern farmer.

He introduced Mr. Kroh as the man who had carried the gospel of diversification to North Carolina, starting the movement there which resulted in lifting that State from the position of twenty-sixth in point of production in 1915, when the crops had a value of \$157,000,000, to fourth place in 1919, with a crop worth \$672,000,000. His plea was for personal contact with the farmer through competent advisers, to show them how to increase their earnings through intelligent diversification and better methods in agriculture, so as to produce more per acre. In North Carolina they were producing as much cotton as before on a greatly reduced acreage. The same thing can be done in Alabama. Proper intensive agriculture means that with the same land he can produce enough to sustain him apart from his cotton, and then he will be able to sell his special crop on his own terms, and not at the bidding of money-lenders and speculators. It will also improve the morale of the farmer in other ways. Instead of working only a portion of the time as he does when producing one crop, he will find enough to do to keep him pleasantly employed at all seasons, and he will gain in independence and in health of body and mind.

The drift to the cities can best be overcome by making it possible for the farmer to earn as good a livelihood as the man in town. The crowding into the cities has become a menace to our national existence. The great nations of the past had become unable to hold their own as soon as urban life had overshadowed the rural. That was true of the great empires of Mesopotamia, of Rome, of modern Italy, and England also has become dependent upon foreign supplies and upon her naval protection of her lines of commerce from the same cause. In the United States in 1880 there was only 30 per cent of the population living in cities; today 54 per cent lives in cities of more than 2500 inhabitants. Actually only 28 per cent of our people live on the soil. This is a grave national peril. The remedy lies in sympathetic co-operation between the dwellers in the cities and those in the country, and in helping the farmer to become independent through diversified farming. He gave many practical illustrations of the gains through the improved methods employed in North Carolina. He also told how the American Federation of Labor had tried to secure a foothold in the National Farm Bureau Association, and how John Howard had defeated this attempt, and had shown the agents of the Federation that no

farmer could live and sell supplies at costs that anyone could afford if he should adopt the eight-hour day and time and a half for overtime. It would mean that the wage-earner in the Federation would starve, and that he could not strike often enough to raise his wages often enough to keep up with the advancing prices of food under such a system of idle trifling.

A meeting of those interested in the movement started here by Mr. Kroh will meet a committee of the Alabama Cotton Growers' Association on Wednesday, February 16, in Montgomery, Ala., to discuss means for giving an impetus to the movement for crop diversification and improvement in agricultural methods. Those going from Birmingham are Judge B. M. Allen, J. O. Thompson, R. L. Newman, Al Garber, Reese Adamson, representative of the Ford automobile interests in Alabama; Jack Pearson, T. W. Barnett and Victor Hanson.

## Deep Drillings in Oklahoma.

Oklahoma City, Okla., February 14.—[Special.]—The Oklahoma Producers and Refiners' Corporation has set casing at 2903 feet on a new deep sand discovered in the Walters field. It is in an area where a 2400-foot sand is producing.

In the cement field the Cement Field Oil Co. has cemented casing on a new deep sand at 3750 feet. Other sands in that region produce at about 1800 feet and 2300 feet.

A third gas well, making about 20,000,000 cubic feet, has been completed in the Deer Creek field of Grant county by the Western States Oil & Land Co.

A new sand in wildcat territory has been entered by the Empire Gas & Fuel Co. a few miles east of Eufaula, McIntosh county. The sand was touched at about 3250 feet, and is making 1,000,000 feet of gas and some oil. Another test with a like showing in sand found at 3150 feet is soon to be completed by Kansas City and New Orleans men 12 miles west of the Empire.

Further drilling into the 2600-foot sand found by the Lyons Petroleum Co. at Holdenville, Hughes county, is to be done when the cement hardens. This is a wildcat, and about six miles from wells lost at a greater depth because of salt water.

In the Gatebo field, Kiowa county, where wells produce from 900 to 1000-foot sands, a new sand has been found at 2200 feet. It has not been tested. In the Duncan district, Stephens county, the Fiddler Oil Co. is on a new gas sand at 3000 feet.

## Decrease in Missouri Livestock.

According to a report of E. A. Logan of the United States Bureau of Crop Estimates, the Missouri livestock on farms today totals 9,383,000 head, valued at \$269,792,000. One year ago the livestock population was 9,913,000, worth \$378,840,000. The 1921 figures show a reduction of 530,000 head and a shrinkage of \$109,048,000.

The value of Missouri horses shows a shrinkage of last year of \$11,770,000. The number of mules decreased from 378,000 last January to 367,000, a reduction of 11,000 head, the value declining from \$45,360,000 to \$34,865,000, a shrinkage of \$10,495,000.

Milk cows, numbering 919,000 last January, decreased to 873,000, a decline of 46,000. Cattle, other than milk cows, decreased 87,000, a shrinkage of \$28,144,000 in value.

Sheep total 1,388,000, compared to 1,525,000, a decline of 137,000.

Hogs number 4,047,000, as compared to 4,305,000 last January, a decrease of 258,000 head, and is the smallest number of hogs on farms since 1913. The total value of all hogs on hand is \$44,517,000, compared to \$71,032,000, a shrinkage of \$26,515,000. The values are near those in 1917.

A prison and manufacturing plant will be established at Montgomery, Ala., by the State at a cost of approximately \$500,000, after plans by Martin J. Lide, architect of Birmingham, Ala. The principal building will be a 3-story structure, 40x600 feet, of reinforced concrete and fireproof construction. The work will be undertaken under the direction of the State forces.



# New Methods in the Handling of Forest Products

## SOME ECONOMIES WHICH MAY BE EFFECTED BY CAREFUL SELECTION AND OPERATION OF MOTOR TRUCKS AND TRAILERS IN LUMBERING.

By F. W. FENN, Secretary National Motor Truck Committee, National Automobile Chamber of Commerce.

Various methods of transportation have been employed from time to time in the handling of our forest products; but in the last few years lumbermen in general have displayed a keenness for inquiry and observation that has resulted in the development of many new devices intended to save both time and money for lumber producers. This has opened a wide field for motor transportation.

Whether a lumberman, after disposing of his mules and horses, can operate a motor truck or fleet of trucks successfully depends on the location of the standing timber he is cutting, the condition of the roads in the vicinity and the average length of the hauls. The relative distance of a tract of timber from established transportation almost always determines the type of equipment which could be used most profitably in bringing the logs to the shipping point.

Mule teams, tractors, horses and yarding engines have been found very effective in the logging of tracts situated near a railroad or running stream. I would not advise the installation of a motor truck where these methods are better suited; but when timber must be hauled many miles through forest paths or over rough country roads to a railroad or navigable river, it is certain that a motor truck will be found the most satisfactory unit of transportation.

Every producer, regardless of how extensive his operations are, is confronted with the problem of keeping his sawmill busy. This means rapid, continuous transportation, for every hour wasted in moving raw material to the mill means a corresponding waste of dollars and cents when the mill is forced to close, or when its operation is partly curtailed because of a shortage of logs.

In this connection, the importance of keeping every unit in the whole transportation scheme in constant operation cannot be too highly emphasized. While a motor truck is running, it is earning money for the owner; but if allowed to stand idle, or is worked at only half capacity, it becomes an expense.

Various parts of logging can be standardized. Every operation, however, has its individual characteristics and unusual conditions. The successful co-ordination thereof requires careful analysis, great skill and experience. It would be unwise to attempt the logging of a large tract of timber a long distance from transportation with a yarding engine and horse team. Equally erratic would be the construction of an expensive railroad many miles for one claim of timber. Possibly the old-fashioned bull team still has its place. Most certainly the railroads and modern equipment are indispensable in the successful maintenance and economical handling of large operations, and it is equally true and certain that the fundamentals are well established in motor truck and trailer logging.

Four years ago this system of logging and trucking was virtually unknown. At present it is estimated that we have in the Northwest, where the timber is large and formerly considered too heavy for such conveyors, nearly 500 trucks and trailers hauling all sizes and lengths of material successfully in some places for distances of six or seven miles.

It has been demonstrated that a 5-ton truck with an 8½-ton double bunk trailer can average carrying of 4000 feet per load. Many loads of 5000, and sometimes 6000, feet are transported on this equipment over good private roads, as officials are usually wisely exacting in the weight of loads hauled on publicly-constructed rights of way. This calls attention to the advisability of securing as light equipment as consistent with safety in maximum loads, the weight of equipment being considered part of a road load. A truck and trailer will carry an average load of 4000 feet, can be loaded in from 10 to 15 minutes, will travel one mile in 10 minutes, unload in 10 minutes; therefore, it is not difficult for one of experience in logging to analyze his particular operation, secure the proper logging and hauling equipment and have it all well balanced and associated.

It doesn't require any special knowledge of mathematics to

exactly determine what the saving should be in individual cases after all the conditions are known. If one truck does the work of five teams for the cost of three teams, the saving is obvious. Ten dollars per day per truck is equivalent to \$3000 per year per truck, and some sawmill owners have found the saving of motor trucks to represent a large percentage of the profits of their business at the end of a year.

The above cost analysis is extremely fair to the horse. There is no reason why trucks hauling twice the capacity of a team and equipped with special loader cannot effect a saving far greater than indicated above. Many trucks so equipped are daily demonstrating this fact.

The size, type and equipment of the trailer have also formed the basis for much discussion. One of the problems which heretofore confronted lumbermen in the use of trailers was the difficulty in making the trailer track with the truck, or to follow the road without cutting off at the turns. The ideal trailer which seems to have been worked out is a two-wheeled rubber-tired trailer with wheels from 40 to 44 inches in diameter. Steel tires have not proven successful for logging trailers. Roads which theoretically required the use of steel tires for ironing out the ruts should either be planked or hard-surfaced before a motor truck should attempt to log over them.

Several different types of reaches have been used. For a while the long, hollow pipe reach found favor with the lumbering industry, but after a while reports began to come in that these reaches bent very easily and were then of no use. Then a wooden pin was placed in the pipe reach, which, while an improvement, did not materially lessen the former dissatisfaction.

The present tendency is toward the wooden reach, in some cases supported by iron brackets or bits, and in other cases by no support at all. When the reach breaks it does not cost much to get another, and the tendency towards breaking is much less than in any other form of reach.

Many lumbermen fail to appreciate that no matter how well built or how capable a lumber truck is, a certain amount of care and attention is required to keep it operating at the highest point of efficiency. They have also overlooked the necessity of supervision of motor equipment in their anxiety to clear the tract on contract time. Aside from these abuses, most of the trouble results from improper methods of loading, overloading and careless driving.

Some lumbermen say it is impossible, at least impractical, to give their trucks the same attention that owners do who operate them under more favorable conditions. This belief is, perhaps, due to the fact that the majority of lumber producers and logging contractors have no real, scientific method of judging truck performance, because they have never attempted in any way to reduce cost or increase efficiency through proper driving or careful routing.

### 34,179,559 Tons Bituminous Coal Exported in 1920.

In its issue of February 12 The Black Diamond states that the total exportation of bituminous coal from the United States in 1920 amounted to 34,179,559 gross tons. This was an increase of 16,204,460 tons over 1919, when a total of 17,975,099 gross tons were exported.

Exports across the Atlantic reached a total of 13,906,644 tons in 1920, as compared with 4,280,642 tons in 1919.

Canada took 14,482,929 tons last year, an increase of 3,832,439 tons over the year 1919.

South America took last year 3,531,967 tons, as compared with 1,481,703 tons in 1919.

The West Indies and other nearby countries took 2,168,699 tons, as compared with 1,467,378 tons for 1919.

# THE IRON AND STEEL SITUATION

## Improvement Near in Steel Market.

Pittsburgh, Pa., February 21—[Special.]—Viewed from any angle, the steel market is bound to improve somewhat in point of activity in the near future. From the standpoint of the season, business has never revived in January or February, while March is a favorite month, as consumptive requirements always increase in the early spring. From the standpoint of prices, a liquidation has set in, which assures materially lower prices being possible to buyers in the near future. From the standpoint of recent conditions, there has been practically no activity, yet even in the most severe industrial depressions there has been at least a moderate consumption of steel. The recent dullness has been too great to last.

As noted in last report, a break has occurred in the steel market, some of the independents, led by the Midvale Steel & Ordnance Co., having set out to quote cut prices. Enough time has now elapsed since the break started to furnish an idea of what it amounts to. The decline in prices is not large, generally \$4 to \$6 a ton, but perhaps \$8 in the case of one or two lines. It is doubtful whether more business, in the aggregate, has been done in the past two weeks than would have been transacted if all producers had held firm on the old prices.

### Extent of Declines.

Lowest prices that have thus far been definitely developed, with the number of dollars per ton they are below the Industrial Board of Steel Corporation prices, are as follows: Bars, 2.00c., \$7; shapes, 2.20c., \$5; plates, 2.25c., \$8; hoops, 2.85c., \$4; plain wire, 3.00c., \$5; nails, \$3.10, \$3; blue annealed sheets, 3.20c., \$7; black sheets, 4.15c., \$4; galvanized sheets, 5.35c., \$7. Standard steel pipe has developed no irregularities, and therefore remains quotable at 57½ per cent basing discount, nor has tin plate, which is \$7 per base box, 100-pound. It is true that tin plate from second hands could be picked up at \$5 to \$6, but that has been the case for weeks past, and there is no connection between the circumstance and the present decline in steel prices generally.

### The Steel Corporation.

While the price reductions have brought very little business to the independents who have been actively seeking business, the break in the market has had a very important effect upon the Steel Corporation's business, both by reducing the volume of strictly new business it was booking and by causing customers to withhold specifications against old contracts, while some have probably held up shipments against specifications previously furnished. Last week the corporation operated at only about 80 per cent, while this week is predicted to average between 70 and 75 per cent, with next week at between 60 and 70 per cent. Sales representatives of independents have called on Steel Corporation customers, quoting cut prices, but the result thus far has been simply to move the consumers to stop taking steel from the corporation. Steel Corporation customers, recalling how well they were treated in 1920, doubtless feel that in due time the corporation will act in the matter of prices.

### No Price War.

There will be no price war in steel. The independent could not hope to secure any advantage by such competition, and the Steel Corporation, on the other hand, certainly would have no disposition to produce at below cost. That there will be close competition is, however, altogether probable.

Just where steel prices will land in the readjustment now begun is quite problematical. It is not merely a matter of overhead, because apart from that it requires much more than half as many men to run a mill 40 per cent as at 80 per cent. Finally, there is some question as to whether costs are going to determine selling prices or selling prices determine costs. Such an issue is plainly developed already in pig-iron. In the past week basic pig-iron has sold at \$25, valley. That is well below the cost of production, but ore and coke will now have to come down.

### Construction Work.

Lettings of fabricated steel work in January are reported by the Bridge Builders' and Structural Society to have represented 18 per cent of the shop fabricating capacity, this comparing with

26 per cent in December and an average of 53½ per cent in the whole year 1920. The business is practically dead, and job let at all being of an exceptional character. It is not a question of steel, for if jobs of this sort were offered, the steel makers would be glad to figure very closely. The main difficulty is the wages in the building trades.

### Pig-Iron.

The first actual business in basic pig-iron for weeks has just gone through, there being a sale of 1000 tons, and perhaps a few other sales, at \$25, valley. The furnaces have been waiting patiently for buyers to show that there was a price at which they would take hold. Voluntary reductions in asking prices have been made, like that from \$33 to \$30 at the beginning of the year, without stirring up interest. Bessemer is now quoted by relation with basic, at \$27. Foundry remains at its former price of \$28, only occasional carloads being called for.

These prices are far below the production costs of 1920 and somewhat below the production cost since the decline in coke, but furnaces expect further reductions in costs, and some are willing to take business at a loss and then try to get their costs down to the sale price.

### Birmingham Awaits Price Readjustment.

Birmingham, Ala., February 21—[Special.]—Lower prices for pig-iron have failed to induce much business. Consumers are apparently expecting further reduction in prices while manufacturers in the Birmingham district assert that there is not much chance for much more cutting of quotations unless there be a material adjustment of wages and other expenses in the make of the product. No announcement has been made of any cut by the corporation, its price having been for a long time around \$38 per ton, when independents were getting \$42 per ton. No. 2 foundry, right along. The Sloss-Sheffield Steel & Iron Co., the Republic Iron & Steel Co., the Woodward Iron Co. and the Alabama Company each have one furnace in blast. All have two or more furnaces in shape for almost instantaneous resumption if there should be demand.

Furnace interests in this district are offering but little prediction as to when a resumption of general activity will set in. Within 30 to 60 days is an impression one can get as to the time that a recovery is looked for in conversation with pig-iron men.

The Birmingham district in recent years has done much work for Cuba in the way of sugar manufacturing plants, railroad construction, etc. Interest therefore is being aroused in steps being taken in Cuba looking to the improving of the credit of that country. Oscar Wells, president of the First National Bank of Birmingham, is now in Cuba as member of the superior financial liquidating commission named by the President of Cuba. He will remain there for some little time in an effort to bring to an agreement the moratorium. G. M. Morrow, Jr., president of the Birmingham Machine & Foundry Co., is also in Cuba. This company, together with the Ingalls Iron Works, the Joubert & Goslin Machine & Foundry Co. and the Hardy-Tynes Manufacturing Co., all of Birmingham, have done considerable work for Cuba in the sugar machinery and transportation construction work. South America is also looked to in the future as a splendid customer of the Birmingham district.

The steel mill operations in the Birmingham district has undergone a little readjustment lately. The big plant of the Tennessee Coal, Iron & Railroad Co. at Ensley is still working steadily, but there is need for new business. The structural steel shape mill at the plant of the Chickasaw Shipbuilding & Car Co., at Fairfield, resumed operations recently, but there is need for business also in this section. The car department of the Chickasaw plant is nearing completion, with a few cars being turned out. The Gulf States Steel Co. has shut down its open-hearth furnace department at the Alabama City mills. The finishing department will continue in operation. The Connors-Weyman Steel Co. is doing some work at its Helena mills. The Birmingham Steel Corporation plant at East Birmingham is finishing some structural steel fabrication for buildings and bridges in the Southeast. The Ingalls Iron Works is finishing some contracts and other steel works of the district are looking forward to more business.

The scrap iron and steel market in the Birmingham district is

very quiet. Cast-iron pipe makers are not anxious to buy in any quantity, apparently waiting until the pipe market begins to show improvement.

The Coosa County Mica Co., operating mica and kaolin in Talladega County, seven miles east of Dadeville, is still doing well, disposing of its products and enjoying prospects for the future.

Quotations for pig-iron and iron and steel scrap in the Birmingham district are as follows:

#### PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$27.50 to \$29; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$28.75 to \$31.25; iron of 2.75 to 3.25 per cent silicon, \$30 to \$32.50; iron of 3.25 to 3.75 per cent silicon, \$31.25 to \$33.75; iron of 3.75 to 4.25 per cent silicon, \$32.50 to \$35; charcoal iron, \$45.

#### OLD MATERIAL.

Old steel axles.....	\$20.00 to \$21.00
Old iron axles.....	23.00 to 25.00
Old steel rails.....	15.00 to 16.00
Heavy melting steel.....	15.00 to 16.00
No. 1 R. R. wrought.....	16.00 to 17.00
No. 1 cast.....	19.00 to 20.00
Stove plate.....	17.00 to 18.00
Old car wheels.....	21.00 to 21.50
Old tramcar wheels.....	20.00 to 21.00
Machine-shop turnings.....	8.00 to 10.00
Cast-iron borings.....	8.00 to 10.00

#### New Well in Panuco District.

Tampico, Mexico, February 21—[Special.]—The East Coast Oil Co., subsidiary of the Southern Pacific, has brought in a new well in the Panuco district. It has an initial flow of 5000 barrels a day. This may be increased when the hole is cleaned out, as the tools are still in the well. Additional storage is to be built to care for the increased production. The flow was struck at a depth of 2175 feet.

#### Valuable Helium Gas Wasted.

Columbus, O., February 21—[Special.]—More than 1,000,000 cubic feet of the valuable non-inflammable gas, helium, which might be used to fill balloons and airships employed for either commercial or military purposes, are wasted every day, according to Dr. Richard B. Moore, chief chemist of the United States Bureau of Mines, in an address to the Columbus Section of the American Chemical Society at Ohio State University.

Dr. Moore said that helium is found in the air in the proportion of one part to 185,000 by volume, and also in the gases which come from springs, and especially in certain natural gases in the United States. The fact that helium exists in these American gases in reasonably large quantities makes the whole question of its use in aeronautics not only a commercial possibility, but a practical undertaking. The United States is, indeed, the only country in the world in which the natural gas contains appreciable quantities of helium.

Dr. Moore expressed the opinion that a special effort should be made to conserve and use to the best advantage an element which is not only a unique weapon in warfare, but an aid to commerce.

#### WORLD'S PRODUCTION OF PETROLEUM.

Output During 1920 Was 688,474,251 Barrels, Gain of 24 Per Cent Over 1919.

The estimated world's production of petroleum in 1920 is 688,474,251 barrels, against 554,505,048 barrels in 1919, according to figures assembled by the American Petroleum Institute. This represents a gain of 133,969,203 barrels, or 24.2 per cent.

Of the total production in 1920 the United States supplied 443,402,000 barrels, or 64.4 per cent. Mexico supplied 159,800,000 barrels (based on exports of that amount plus production marketed at home), or 23.2 per cent of the world's output.

By far the greater gains were made by the United States and Mexico. United States production increased from 377,719,000 barrels in 1919 to 443,402,000 barrels in 1920, a gain of 65,683,000 barrels, or 17.4 per cent. Mexico increased from 87,072,954 barrels to 159,800,000 barrels, a gain of 72,727,046 barrels, or 83.5 per cent.

The estimated production by countries follows:

	1919	1920
United States.....	443,402,000	443,402,000
Mexico.....	159,800,000	159,800,000
Russia.....	30,000,000	31,000,000
Dutch East Indies.....	16,000,000	15,700,000
India.....	8,500,000	8,400,000
Roumania.....	7,406,218	6,507,748
Persia.....	6,004,734	6,200,812
Galicia.....	6,000,000	6,200,000
Peru.....	5,700,000	5,700,000
Japan and Formosa.....	2,213,082	2,100,000
Trinidad.....	1,628,637	2,700,000
Argentina.....	1,306,926	1,200,000
Egypt.....	1,089,213	1,000,000
France.....	700,000	700,000
Venezuela.....	500,000	500,000
Canada.....	220,000	220,000
Germany.....	215,340	215,340
Italy.....	28,000	28,000
<b>Total.....</b>	<b>688,474,251</b>	<b>688,474,251</b>

\*No exact information available.

†The Alsatian fields' production appears under Germany in 1919 and under France in 1920.

#### Large Public Utility in a Receivership.

The South Carolina Light, Power & Railways Co., owner of the Gaston Shoals development in Cherokee county, South Carolina, supplying electric light and power, operating the street railways in Spartanburg, S. C., and also supplying gas, has been placed in a temporary receivership, according to a report from that city, which says that the court has appointed G. B. Tripp, vice-president and general manager of the company, and J. B. Lee, president of the Bank of Commerce at Spartanburg, as receivers. A hearing will be held March 17 to decide whether the receivership shall be permanent. The action for the receivership was on behalf of the General Electric Co. of New York on a claim for \$13,358.58. It is alleged that the floating debt of the power company is more than \$289,616, and that it has passed dividends on its outstanding preferred stock.

#### NEW \$200,000 HIGH SCHOOL BUILDING AT BOGALUSA, LA.



Entertaining many prominent visitors of the State, among whom were Governor Parker, Mayor McShane of New Orleans and others, Bogalusa recently dedicated its new high-school building completed at a cost of \$200,000. Mayor W. H. Sullivan, vice-president and general manager of the Great Southern Lumber Co., was chairman of the reception committee welcoming the visitors.

The building is 200x90 feet, of brick construction, with built-up roof and rift pine floors. It is equipped with the Ideal system of steam heat. Nolan & Torre of New Orleans are the architects and J. V. and R. T. Burkes of Hattiesburg, Miss., the general contractors.



# GOOD ROADS AND STREETS

## TEXAS HIGHWAY IMPROVEMENTS.

**More Than Two Thousand Miles Under Construction.  
\$2,873,225 from Motor Vehicle Licenses.**

Austin, Tex., Feb. 21.—[Special].—It is shown by the report of the State Highway Department that during the two years ended December 1, 1920, a total of \$3,439,969 was received as revenue from the registration of motor vehicles. Of this amount there was available for State aid \$2,873,225. Texas' pro rata share from Federal aid for the period 1916 to 1921 was \$16,800,104, according to the report covering that period filed with the Governor.

The report shows that on December 1, 1920, there was a total of 384 active projects, an increase in the two years of 258. The active mileage involved is 4082, being an increase in the last two years of 2576. The estimated construction cost of this mileage is \$4,716,592, being an increase over the preceding two years of \$37,563,556. Of the active mileage, 976 miles are completed and under maintenance, and 2949 miles are now under construction.

The total amount of Federal aid that has been appropriated to active projects is \$14,536,005, an increase during the biennial period of \$11,294,481. The total amount of State aid allotted to active projects is \$4,088,615, an increase in two years of \$1,681,382, with an available balance in the State highway fund of \$2,365,368, which includes amount due from Federal department for advances made upon Federal-aid construction work.

The total operating expenses of the department for the biennial period was \$329,606, or 1.09 per cent of the aid allotted to active projects, or seven-tenths of 1 per cent of the estimated cost of these projects, or 5.8 per cent of the total disbursements made by the department for the biennial period.

The registration and reregistration of motor vehicles has increased during the biennial period from 250,501 to 422,476. Transfers have increased from 28,891 to 116,939.

The department has received from the Federal equipment appropriation 1161 trucks, listed at \$3,290,329; 168 automobiles, listed at \$65,300,000, and miscellaneous construction equipment to the value of \$970,462, or a total of \$4,335,091 worth of property.

Trucks to the number of 1006 and 120 automobiles and a large amount of miscellaneous equipment have been distributed to the counties. The cost of shipping, storage and handling this equipment to the department has been \$454,084, of which 57.7 per cent was for loading at origin and freight distributing points in Texas; 32 per cent was for labor, repairs and supplies preparatory to issuing, and the remaining 10.3 per cent was for overhead expense, including office salaries, field inspectors and miscellaneous items. This expense amounts to 10.5 per cent of the value of the equipment, and \$438,608 has been reimbursed by the counties contracting for equipment, with outstanding bills of \$25,570 to be collected.

## A Big Year for Railroad Bond Maturities.

An interesting and valuable table has been compiled by the Bureau of Railway Economics showing the funded debt of the Class 1 railroads in the United States actually outstanding and the years of maturity up to 1949 inclusive. There is thus shown an aggregate of more than \$222,400,000 of securities that will mature during the current year, which is a much larger amount than will mature in any other year until 1934, when over \$333,700,000 will fall due. Of course, it goes without saying that the great bulk of the securities maturing this year, 1921, will be refunded or otherwise extended as to payment, as the present financial condition of the carriers and the attitude of capital toward them precludes any other mode of settlement or adjustment for the present. The most of this year's maturities consist of collateral trust bonds, viz. \$227,103,900, mortgage bonds amounting to \$73,904,585 and miscellaneous obligation \$21,554,288. In 1934, the year of the greatest total of maturities included in this list, mortgage bonds are away in the lead, with a total of \$228,453,000, collateral trust bonds having \$16,000,000; income bonds, \$9,104,000, and miscellaneous obligations \$80,143,744.

## \$1,500,000 Available in Louisiana for Federal Aid in 1921.

New Orleans, La., February 16.—[Special].—Revenues for State aid in construction and maintenance of State roads and for the support of the State Highway Departments are derived in Louisiana from the imposition of a State-wide tax levied at the rate of one-fourth mill on each dollar of taxable property. This tax produces approximately \$150,000 per annum.

The State Highway Department has available for the year 1921 approximately \$1,500,000 for the construction of State-aid roads. This includes the funds from the Federal Government and the proceeds of the one-fourth mill State road tax above referred to.

During the year 1920 the department completed 146.88 miles of highway in 13 parishes, costing approximately \$898,809. The department has under construction at the present time 521.7 miles, estimated to cost \$7,825,000, approximately 50 per cent of which is to be paid by the Federal Government. A large percentage of this mileage will be completed during the year 1921.

Practically all mileage will be gravel-surfaced.

The State highway officials are as follows:

Board of State Engineers—F. M. Kerr, president; Gervais Lombard, George Schoenberger, Sidney F. Lewis, F. M. McCarroll, assistant engineers; headquarters, New Orleans.

State Highway Department—F. M. Kerr, chief State engineer; Duncan Baile, State highway engineer; T. S. Shields, assistant State highway engineer; L. A. Sumner, construction engineer; W. F. Cooper, office engineer; Charles F. Wood, secretary.

## Red Rock Road to Be Improved.

Perry, Okla., February 15.—[Special].—The Red Rock bottom road will be made a passable highway this spring as soon as the Noble County Commissioners can get the excavators, elevators and dump trucks at work. This stretch is on the main Canada, Kansas and Gulf Highway, between Miller Bros.' 101 Ranch and this city. The mile and a half through the Red Rock bottom has been a nightmare to travelers of this section for years, and the prospect of improvement this spring means that one can drive from Wichita to Oklahoma City in a half hour less time and at considerably less expense. The work necessitates moving of about 20,000 yards of dirt and 5000 yards of rock, the reconstruction of a bridge, and ditching and revetment work in about two miles or more of ditch to protect the road and adjoining fields from damage.

## Would Place Dixie Highway Division in Good Condition.

Lexington, Ky., February 19.—[Special].—A move to complete and repair the eastern division of the Dixie Highway, extending from Cincinnati, south through Lexington to Knoxville, has the backing of all three cities, and also the officials of the Highway Association, following a meeting of representatives in Cincinnati last week. The greatest obstacle to travel south of Lexington is an incomplete section of road near Livingstone, Ky., in Rockcastle County, and the Lexington Board of Commerce today named two of its officers to work out a plan to build a temporary road around this stretch, eight miles in length, until it shall be completed next year. Mayor T. C. Bradley of Lexington, has urged all Lexington civic organizations, this week, to name representatives, to go in a body before the State Highway Commission at Frankfort and bring pressure to bear to have repair work between Cincinnati and Lexington pushed this year. At the conference in Cincinnati last week, Mayor Bradley proposed that a bond issue be voted by the various Kentucky counties between Lexington and Cincinnati through whose boundaries the road extends. Cost of repairing this section of the highway, 80 miles long, was estimated to be \$300,000.

## RAILROADS

### Mr. Vauclain Looks About With Confidence.

President S. M. Vauclain of the Baldwin Locomotive Works, Philadelphia, says in the annual report of the company covering the year 1920, just issued in pamphlet form:

"Notwithstanding the present unsatisfactory condition of business the world over, there is every reason to believe that your works may be operated at the same percentage of their capacity during the year 1921 as they have been during the year just closed. The natural readjustment which we are passing through will no doubt have some surprises in store for us, but your president looks forward with confidence to an early stabilization of your business."

The summary of operations for the year shows that sales, both cash and deferred, totalled \$73,542,066, on which there was a manufacturing profit of \$7,554,839. Other income, amounting to \$4,200,361, made a total of gross profits for the company \$11,755,200. After deduction of other expenses, \$3,347,931, there was left a profit of \$8,407,269. Deducting from this for depreciation, income taxes and deferred profits, there was left a net cash profit of \$4,428,518, from which dividends were paid on both preferred and common stocks, leaving a surplus of \$1,628,518.

Many sales of the company are made on a deferred basis, the aggregate value of those for the year being \$22,307,718, the profit thereon being \$2,878,751.

The total assets of the Baldwin Locomotive Works as shown by the balance sheet are \$91,079,156. The consolidated balance sheet, which includes the Standard Steel Works Co. with the Baldwin Works, displays total assets of \$104,532,486.

### Tennessee Central Wants \$3,000,000 for Improvements.

A loan of \$3,000,000 for five years is asked of the Government by H. W. Stanley and W. K. McAlister, receivers of the Tennessee Central Railroad, whose application for that sum is before the Interstate Commerce Commission. In filing the application it was stated that the road is unable to promptly and safely handle traffic; that coal mines on its lines are operating only 50 per cent of their capacity, and that lumber and other forest products, as well as miscellaneous freight, originating on them cannot be properly transported because of lack of engines, cars, side-tracks, shops, etc., and it is estimated that earnings can be increased from 45 to 50 per cent if the improvements are made.

Some of the proposed improvements are: Additional trackage, including passing tracks, business tracks and yard tracks, at Monterey and Emory Gap, \$110,000; new depots and roadway and office buildings, \$128,000; engines and shop facilities at Monterey and Emory Gap, \$24,700; strengthening bridge between Lebanon and Monterey, \$6500; six new Mikado locomotives, \$270,000; 300 coal cars of 80,000 pounds capacity, at \$3000 each, \$900,000; six passenger cars at \$17,500, \$105,000.

The receivers are quoted as saying that they have tried in vain to obtain money from other sources in Nashville and in New York, but that the banks declined to loan funds for railroad purposes.

### New Express Stock All Taken.

Fairfax Harrison, president of the Southern Railway system, says concerning subscriptions to the million dollars of capital stock offered to the people of the South by the new Southeastern Express Co., that the books were opened last Thursday morning and were closed at night. The stock was allotted proportionately in all of the 14 States served by the lines of the Southern Railway system and the Mobile & Ohio Railroad. Reports received show over-subscription in every State.

The stock list will comprise the names of at least 2500 widely distributed Southern business men holding on the average about four shares apiece. No subscription over 100 shares was received, and no officer or employee of the railroad was permitted to participate, although many, especially employees, offered to subscribe.

The Southeastern Express Co. will now proceed, under the management of President John B. Hockaday, to purchase its equipment, and it will begin service at the earliest practicable date, of which announcement will be made.

### EMPLOYEES REJECTED WAGE CUT.

#### Georgia Midland Railroad Then Obligated to Go Into Receivership.

W. D. Veasy and Gordon D. Carson of Gainesville, Ga., have been appointed receivers for the Gainesville Midland Railroad, 40 miles long, from near Gainesville to Athens, Ga., with a branch 32 miles long from Belmont to Monroe, Ga. They will continue to operate the line.

The receivership followed an effort by President George J. Baldwin to gain the consent of the employees to a reduction of pay when he presented to them a statement showing that the road had lost in operating expenses over and above all income and revenue during the last 12 months more than \$84,000 and that this loss was continuing, with no prospect of relief. He also told them that wages had increased from a total of \$83,343 paid in 1917 to \$180,913 in 1920, and, furthermore, that the principal owners and mortgage creditors had indicated a willingness to defer any interest and income on the investment of over \$1,000,000 in the property for six months to relieve the situation. Mr. Baldwin then proposed to the employees to devote all income from operation for this period to pay the necessary operating expenses and the wages of employees for six months and to readjust the payrolls on that basis. He stated in conclusion that this was the only way that the company could continue to operate and urged them to accept the proposal. A number of employees said they were willing to accept it and so voted, but the majority decided against it.

The creditors petitioning for the receivership are Henry M. Bradley of Boston and others.

The securities issued against the property include \$661,000 of first mortgage 5 per cent bonds due in 1935, \$14,000 second mortgage 6s (now firsts) due in 1922; \$213,285 6 per cent notes Series A, \$75,000 6 per cent notes Series B and \$9,726 6 per cent settlement notes, all the notes being due in 1922.

### Interurban Plan to Reach Texas Oil Fields.

Austin, Tex., February 19.—[Special.]—When the bill providing for placing the interurban electric railways in this State under the jurisdiction of the Texas Railroad Commission was considered by the House Committee on Common Carriers, it was revealed that plans are well advanced to construct an interurban line between Fort Worth and Mineral Wells, Tex., about 60 miles; also that it is proposed to build another interurban of the same length between Mineral Wells and Breckenridge, Tex. These statements were made by Sterling P. Clark, vice-president of the Fort Worth & Mineral Wells Interurban Railway Co., who opposed the bill. The interurban between Breckenridge and Mineral Wells to be built by another company is to connect the Fort Worth line and furnish through service from Fort Worth to Breckenridge. Mr. Clark further said that the latter line was almost a necessity, for, with the completion of the Wichita Falls & Southern Railway extension through Graham to Breckenridge, Fort Worth might be greatly damaged as a trade center for the oil-field country and lose its prestige as the distributing point for that region. On the other hand, the construction of the Mineral Wells and Breckenridge interurban would give Fort Worth direct connection with the heart of the oil fields.

### Paid \$108,000 for Wartime Losses.

The Atlanta, Birmingham & Atlantic Railroad Co. has been paid \$108,000 under the guaranty provision of the Transportation Act, according to an announcement of the Treasury Department reported from Washington. It is stated that this payment makes a total of \$263,931,000 paid to various carriers for losses sustained by them during the Government control of the railroads.

### Would Create an Equipment Trust.

The Missouri Pacific Railroad Co. has applied to the Missouri Pacific Service Commission for authority to issue \$1,836,000 of 6½ per cent serial equipment trust notes, maturities beginning February 1, 1925. They are for the purchase of 25 locomotives at \$70,975 each, 15 at \$41,250 each, 5 at \$61,250 each and 5 at \$75,500 each, the latter being Mountain type passenger engines.

# LUMBER AND BUILDING MATERIALS

## Production of Southern Pine Mills Steadily Increases.

New Orleans, La., February 19—[Special.]—Reports for the week ending February 11 from 135 mills of the Southern Pine Association show that orders were received for 2692 cars, amounting to 56,876,573 feet, compared with orders received during the preceding week by the same number of mills for 2941 cars, amounting to 62,137,448 feet.

The summary of the reports from the various mills is as follows:

	Cars.	Feet.
Orders on hand beginning of week.....	19,452	226,829,856
Orders received during week.....	2,692	56,876,573
Total .....	13,144	277,706,429
Shipments during week.....	2,977	62,898,656
For the week—	10,167	214,808,376
Orders .....		56,876,573
Shipments .....		62,898,656
Production .....		62,499,875
Normal production these mills.....		89,858,812

Shipments for the week were .78 per cent above production. Orders were 8.87 per cent below production and 9.57 per cent below shipments.

The actual production was 30.55 per cent below normal, and shipments were 30 per cent below normal production. Orders received were 36.70 per cent below normal production. The decrease in "orders on hand" during the week amounted to 2.73 per cent.

The production for the week at 135 mills amounted to 62,499,875 feet. For the week ended December 31 the production of 125 mills amounted to 22,522,354 feet; for the week ended January 7 the same number of mills reported production amounting to 39,762,563 feet; 136 mills reported a production of 48,956,331 feet for the week ended January 14; on January 21, 125 mills reported a total production of 51,603,200 feet for the week; reports from 132 mills for the week of January 28 placed the total production at 53,061,327 feet, and on February 4, 135 mills gave the week's production as 57,926,050 feet.

The average production during the week ending February 11 was 462,295 feet, compared with an average of 429,082 feet for February 4, 401,980 for January 28, 412,826 for January 21, 359,973 feet for January 14 and 318,101 for January 7.

## Strength of Boxes Is Affected by Moisture Content.

Of two boxes made exactly alike from the same grade and thickness of lumber, one may stand 10 times as much rough handling as the other, because of a difference in the moisture content of the lumber or a difference in subsequent storage conditions, says a report of the Forest Products Laboratory, Madison, Wis., from which the following facts are taken. Tests show that only when a box is to be used for a very short time immediately after manufacture, is the proper seasoning of the lumber unimportant.

Within a week after manufacture, a box made of green lumber suffers a marked reduction in strength. As the wood dries, the nails lose their grip. The fibers which are bent down along the nail shrink away from it in the direction of the end grain, the direction in which it was most firmly held, leaving the nail held only by two sides. Under such circumstances the weaving action during transportation alone will readily cause the nails to work loose and even come out of the box. Boxes made of green lumber at the laboratory and kept for a year in dry storage tested only about one-sixth as strong as similarly-made boxes tested at the time of manufacture.

If a box is made of dry wood and then subjected to alternate wettings and dryings, through cold storage or exposure to weather, the nails will be loosened just the same as in green lumber. Boxes made up from dry lumber were kept for two weeks in damp storage and then for two weeks in dry storage. After this treatment, the boxes withstood only one-tenth as much rough handling as those made of air-dry lumber which had not been subjected to adverse storage conditions.

A box made of lumber in the proper moisture condition will

stand ordinary storage without any appreciable loss in the holding power of the nails. The best results are, therefore, obtained when the lumber is seasoned in accordance with the atmospheric conditions which the box will encounter in service. If it is impossible to forecast these conditions, it is advisable to use thoroughly air-dry lumber which contains from 12 to 15 per cent moisture.

## Pushing Public Improvements at Cordele, Ga.

All necessary public improvements will be pushed to completion in the city of Cordele, Ga., if plans of J. Gordon Jones, Mayor, and supporters are fulfilled. It is now planned to vote a bond issue of \$50,000 to provide for a complete light and power plant in connection with the municipally owned water plant, and estimates supplied by engineers show that such a plant can be built for about \$40,000. This will leave \$10,000 available for improvements to the water-works facilities and enable an extension of mains for fire and domestic water supply.

In a letter to the MANUFACTURERS RECORD Mr. Jones says:

"It is my purpose as Mayor of the city, and I believe I have the full co-operation of the members of the Council, to push vigorously all public improvements and not allow the depression which seems to be on the country to some extent yet to hinder our going forward in the accomplishment of the work to give to this progressive little city the needed public improvements, such as municipally owned light and power plant, extension of water mains and sanitary sewerage.

"We have just completed a new high-school building at a cost of \$50,000, thereby giving to this city three magnificent public school buildings at a cost of \$200,000. We have adopted the Ward school system, with a main high school. With a municipally owned light and power plant, since the city already owns its water plant, we believe that we will be on the list classed among the first cities of our size in the country for cheap electric current for light and power purposes as well so as cheap water, complete sewerage system throughout the city, and one of the best school systems to be found in the country."

## Building Now Urged by Varied Interests.

Nashville, Tenn., February 21—[Special.]—That now is the time to build residences, business houses and conduct construction of all kinds was the consensus of opinion expressed by speakers at a meeting held at the Commercial Club under the direction of the Nashville Contractors' Association on February 9, at which were representatives of the city government, real estate agents, architects, engineers, general contractors, building materials dealers, laborers, manufacturers and insurance companies. The meeting was for the purpose of bringing together men in all lines interested directly and indirectly in building, and to get from them the general viewpoint on conditions at this time. D. Y. Johnston, president of the association, opened the meeting, and representatives of the various interests expressed their opinions on building conditions.

## Begin Work of Laying Telephone Cables.

Contract has been awarded the Telegraph Construction and Maintenance Co., Ltd. of London, England, for laying three telephone cables between Key West and Havana, and operations have already begun. It is expected that the work of laying the cable will be completed by March 1 and the line in operation by the middle of the month. The cable-ship Stephan is employed in the work. The cables cost approximately \$1,000,000, and a large sum will be expended in laying the lines and in auxiliary improvements.

## Stock Increased \$500,000 for Improvements.

The stockholders of the Charleston Consolidated Railway, Gas & Electric Co. of Charleston, S. C., have voted an increase of capital stock to the amount of \$500,000, making the aggregate capitalization \$5,500,000. It is stated that the increase will be employed to pay for additions and improvements to the property.



## TEXTILE

### New Florida Silk Industry Formed.

Articles of incorporation have been filed by the American Silk Industry Co. of St. Augustine, Fla., for the purpose of establishing and maintaining a silk farm in St. John's county and engaging in the manufacture of silk. The new company is capitalized at \$500,000 and has elected the following officers: Thomas De Pamphilis, president, New Augustine, Fla.; J. M. Eastham, vice-president, Anniston, Ala.; W. L. Blackburn, treasurer, Wheeling, W. Va.; W. A. McWilliams, secretary, St. Augustine, Fla.

With reference to his new plans for this new industry, Mr. De Pamphilis previously advised the MANUFACTURERS RECORD that he had prepared land on which to plant immediately 25,000 mulberry trees from 7 to 12 feet tall and 50,000 trees of smaller size. Also a nursery for raising 1,000,000 trees is planned in the spring. The silk factory will have facilities for 10,000 pounds of silk cocoons per crop.

### Anniston Cordage Co.'s Addition.

Work has been begun by the Kenyon Plumbing & Electric Co. of Anniston, Ala., on the installation of an automatic sprinkler system, plumbing, steam heating, electric lighting and motor installations in the plant addition of the Anniston (Ala.) Cordage Co. The new building is 126 feet wide by 100 feet long, 3 stories high. The walls are of brick, and the interior construction consists of wood columns, beams and plank floors. The cost of the enlargement is estimated at \$200,000, and will increase the capacity of the mill to 5000 spindles. The principal product is braided cotton sash cord. Charles T. Main of Boston is the engineer, and the Flynt Building & Construction Co. of Palmer, Mass., is the general contractor.

### Textile Mill Notes.

The Riverdale Cotton Mills of West Point, Ga., will be consolidated with the West Point Manufacturing Co. of the same city. The Riverdale company is capitalized at \$350,000.

Press reports state that the Blue Buckle Cotton Mills of Rock Hill, S. C., will resume full-time operations in the near future. The day operatives, numbering 500, will begin work this week, and the night force of about 500 will soon be employed again. The plant manufactures denims, and contains 18,890 ring spindles, with accompanying equipment.

The Cash Mills of Gaffney, S. C., which recently applied for receivership, decided at a meeting of stockholders to reorganize the company, issue \$400,000 worth of new stock and operate the plant. Of the \$400,000 of stock to be issued, \$100,000 will be used to retire outstanding bonds and the remainder for operation. The mill equipment includes 10,240 ring spindles, 230 broad looms and 20 cards for the manufacture of print cloth.

The Opelika Cotton Mills, H. H. McCall, secretary, Opelika, Ala., has called a meeting of stockholders to be held on March 8 to consider the adoption of one of the three following proposals: An increase of \$150,000 in capital; the issue of \$125,000 in bonds; the execution of a mortgage or deed of trust to secure against loss any person or persons who may loan money direct to the corporation, the amount of such loans not to exceed \$100,000.

Within 30 days the Hickory Hosiery Mills of Hickory, N. C., expects to begin operating a branch hosiery mill at Lenoir, N. C. The company has leased a building and will install an initial equipment of 35 machines for the manufacture of medium-priced hosiery for men and women. About 20 operatives will be employed at first, but later it is planned to install additional equipment for an ultimate annual production of 156,000 pairs of hosiery, providing employment for about 50 operatives.

Arrangements are being made by the Helena Spinning Co., John B. Wright, president, West Helena, Ark., for the immediate rebuilding of its picker department, recently burned at a loss, including cotton, of approximately \$25,000. Accordingly, the company is inviting prices on picker, one 40-inch breaker with automatic feeder and one 40-inch intermediate and finisher lappers. The mill has a daily capacity of 8000 pounds 26 2-ply yarn, and is equipped with 6656 spindles, electrically operated.

### The Cotton Movement.

In his report of February 18, 1921, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 202 days of the season was 7,572,001 bales, a decrease from the same period last year of 2,162,612 bales. The exports were 3,265,574 bales, a decrease of 920,334 bales. The takings by Northern spinners were 984,102 bales, a decrease of 1,053,064 bales; by Southern spinners, 1,977,976 bales, a decrease of 960,805 bales.

### Commendations, Kicks and Comments

#### The Houston Pauperization Policy.

C. M. BARNES, Marston, Md.—I heartily endorse your campaign, from its inception, against the Federal Reserve Board and Secretary Houston's policy of pauperization.

#### A Spiritual and Material Upbuilder.

GEORGE R. COLLINS, President Collins Granite Co., Danville, Va.—We are very glad to be able to use some space in the MANUFACTURERS RECORD not only for the good it will do us, but that we may co-operate with you in some small measure, beyond the amount of our subscription, in the great work you are doing for the spiritual and material upbuilding of our country, North as well as South, wherever your magazine is read. It is beyond all praise and, in our opinion, is without parallel in the journalistic field in the United States.

#### Commendation From South American Subscriber.

SANTIAGO SCOTTO, Buenos Aires,—Enclosed check to cover my subscription up until June 30, 1922. I am glad to say that not only has your publication interested me, but I have found it to be the most complete one of its character, and I am very glad to continue to be a subscriber.

#### Far-Reaching Results.

J. YEAR MANN, Secretary Chamber of Commerce, Burlington, N. C.—Allow me to say a few things which I have been delaying for some time, regarding the splendid championship you have awarded the South through the columns of your publication. Since but a boy, I have been in touch with the MANUFACTURERS RECORD. My father received it, and since leaving home your publication has come into the several offices where I have been employed. It seems to me that your efforts have been far-reaching, and that much has been accomplished through the pages of the MANUFACTURERS RECORD.

#### Commends Good Roads Work.

D. H. MARRERY, President Marbury Lumber Co., Birmingham, Ala.—You are certainly on the right track in your issue of January 27 in giving prominence on the front cover and in your paper on the necessity of improved highways in our country, and especially does this apply in the South.

With all the opportunities offered in climatic conditions, there is nothing so badly needed now as good roads, and as results come only by continued efforts, we hope that you will keep up the good work.

### A New American Clay for Loading Paper.

A highly colloidal clay which exists in large deposits in the intermountain regions of the United States has been found to be valuable as a loading material for giving finish and printing qualities to book paper, says the United States Forest Products Laboratory of Madison, Wis. When this clay is used in conjunction with English China clay, the retention of the English clay is materially increased, and the paper produced has a superior finish and appearance, and a more velvety feel. The admixture of this clay similarly improves the retention of other fillers, and is especially desirable with some which have a low retention.

The ability of the new clay to remain in suspension may make feasible the installation in paper mills of a central mixing plant, from which the loading material can be piped a considerable distance to the beaters without danger of settling or clogging of the pipe lines, and with the assurance that the concentration will remain uniform. The properties and use of the new loading material are more fully described in a report which may be obtained from the laboratory on request.

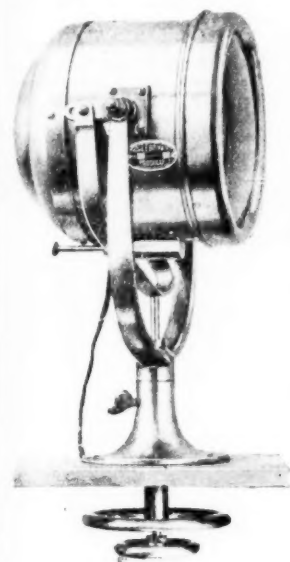
## MECHANICAL

### A New Searchlight.

A remarkable light projector or searchlight developed by S. L. Lebby of Charleston, S. C., the patents for which and other inventions made by him have been acquired by the Southland Steamship Co. of Savannah, Ga., is displayed in the accom-

panying illustration. The invention consists of a reflector and bulb of distinctive character, and there are other patented features of various light projectors designed by Mr. Lebby during the last eight or ten years. It is remarked that this searchlight, the mirrors of which have been developed along radical lines, projects the greatest possible amount of light generated in a single beam of uniform high intensity, but entirely free from any divergence to cause an offensive glare. There are different reflectors to obtain beams of different degrees of divergence for various requirements, and there is a handy focussing arrangement to widen or contract the beam instantly.

This searchlight is wholly of brass or bronze, and is fitted with the Lebby compensated mirror and bulb, as well as with a well-designed rig for maneuvering and controlling the beam from the inside



THE SEARCHLIGHT READY FOR USE.

of a pilot-house. The bulb is placed in the reverted position in the axis of the mirror and mounted on a standard, which is moved toward or away from the mirror by the focussing thumbnut. The searchlights are manufactured in 7, 10 and 14-inch sizes, and finished in polished brass, black, nickel and battleship gray enamel, for use on either 6, 12, 32 and 110-volt circuits. They have an actual range of from one-half mile to one mile, although not, it is stated, consuming more than from 35 to 160 watts, according to the size of the searchlight and the voltage employed. They are adaptable to a great variety of uses, not only for vessels, but for industrial and commercial purposes, such as illuminating mines and other excavations, construction on which has to be done at night; advertising and sundry other purposes.

In this connection it is important to observe that the company has about completed the development of a glareless automobile flood light and headlight, for the production of which manufacturing facilities are now being provided. It is also planned to develop a locomotive headlight, a headlight for trolley cars and several forms of floodlights for industries.

### Constructing 400-Ton Iron Ore Crushing Plant.

Linden, Texas, February 18—[Special.]—Construction of a 400-ton iron ore crushing, screening and roasting plant at Bowie Hill, near here, by the Pratt Bros. Iron Ore Development Co. of Minneapolis, Minn., is in progress. It is planned by the company later to install the magnetic process of treating the ore instead of the roasting method. It is estimated by the company that its property at Bowie Hill contains between 5,000,000 and 6,000,000 tons of iron ore and that its other holdings in the county will yield about one-half billion tons of ore, which runs about 54 per cent pure iron and 4 per cent aluminum, the remainder consisting of other mineral substances. The company's plant has track connection with the Texas & Pacific Railroad and it will obtain a natural gas supply from the Southern Gas Co. at Cass, Texas.

### New Type of Steam Car and Mine Locomotive.

The Dempster Steam Car Co. of Knoxville, Tenn., is reorganizing for the purpose of continuing the manufacture of its products on a larger scale, and has now begun the manufacture of two new types of equipment—a steam car and a mine locomotive—designed by R. S. Dysart, steam automobile engineer and designer and general manager of the company.

Describing the new products, Mr. Dysart writes to the MANUFACTURERS RECORD:

"The steam car is of medium size and price, being made in two and five-passenger models. Fundamental principles which have been proven successful in steam automobile engineering have been given careful consideration, and a number of entirely new features have been embodied after thorough tests. Kerosene is the fuel used.

"The steam mine locomotive is built on sturdy, compact lines, and is designed to be used in mines, quarries, brick yards, lumber yards and any other industrial yards where a compact, reliable engine is needed.

"It uses the same type power plant as the Dempster car. The drive is direct, the engine being geared to the rear axle gear. The boiler is of the fire-tube, water-level type, and 500 pounds of super-heated steam is used."

## FOREIGN NEEDS

[The MANUFACTURERS RECORD receives many letters from abroad asking for information about American goods, and others, from men who wish to represent American houses. Without assuming any responsibility for these concerns, we publish a summary of the foreign letters of inquiry from week to week.]

### Moving-Picture Machines, Etc.

UGO COCCANARI, Borgo Pio, 44: Rome, Italy.—Every American product is a good seller. This is acknowledged generally throughout the Italian market. There are, however, two enormous difficulties which confront sales, i. e., the high rate of exchange and the difficulty of obtaining circulars and samples from manufacturers. Besides representing two Italian houses, the Società Anonima "Este" and the Società Brevetti S. Coccanari, I would like to represent American manufacturers either of moving-picture machines or other goods. I have written to quite a number and received prompt reply, but they have sent no catalogs, and when I have asked for permission to represent them, I have received this answer in every instance: "Do it on your own account. Do it on your own hook." Do you find that this is the best and most rapid way to popularize your products? My answer is plainly, "No!" Now, I ask nothing for myself, but I do ask a greater confidence that would permit the risking of a machine, with the probability of selling a hundred of them. And I believe that knowing how to choose, one can still find honest men—even in Italy—even among business men.

### Building Materials and Equipment.

C. H. EDWARDS, Engineer, Clemens road, Vesperry, Madras, S. India.—I have just set up as an architect here and require books and portfolios giving plans and designs for private as well as public buildings and materials in use in modern styles of buildings, floorings, sanitary fittings, laboratories, staircases, etc. I want to know about drawing and mathematical instruments also. I should like to know what would prevent the salt in the air affecting lime and cement plaster in walls and causing it to crumble and fall off in flakes. Is there any preventative, or is there any wash put over lime plaster which will prevent it?

### Envelope-Making Machines.

TATEISH TEADING CO., No. 7, Minami-Daikokucho, Kiobashi-ku, Tokyo, Japan.—Re: Letter Envelope-making Machine. We shall be very glad if you will kindly obtain for us a catalog or illustrative pamphlet for this class of machine, together with the best export price.

### To Manufacture Steel Alloy and Refractory Material.

The Zirconium Company of America has been incorporated to manufacture ferro-zirconium and zirconium oxide and has acquired the property of the Baltimore Rubber Tire Manufacturing Co. at Monument and 11th streets., Baltimore, Md.

It is understood that the company will install electro-chemical equipment to produce one ton or more of ferro-zirconium and one-half ton of zirconium oxide daily. The principal markets will be the iron and steel manufacturers of the country. The officers are: George F. Dixon, president; Philip G. Spencer, vice-president; Charles W. Smiley, secretary, and Morris Meyer, treasurer.

# Construction Department

## EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

## DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

## Airplane Plants, Stations, Etc.

La., Shreveport.—Hangars.—Gulf States Aircraft Co., Henry Toneray, V.-P. and Ch. Pilot, plans to erect hangar.

## Bridges, Culverts and Viaducts.

Ala., Montgomery.—Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, Ky., will construct bridge across Alabama River; Union Bridge & Construction Co., Contr., Kansas City, Mo.

Ark., Wilmet.—Wilmet Road Dist. will build steel turnbridge across Bayou Bartholomew; total length 388 ft., width of draw span 150 ft.; substructure of concrete; superstructures of steel, with 3-in. wooden floors; bids until Apr. 4. (See Machinery Wanted—Bridge Construction.)

Fla., Titusville.—Will build bridge across Indian River to Peninsula; will sell \$175,000 bonds; N. T. Forscher, Clk. Brevard County Comms.

Ga., Columbus.—Will build bridge across Chattahoochee River; reinforced concrete; vote Mch. 1 on \$180,000 bonds; changed date from Jan. Address The Mayor.

Ky., Bowling Green.—Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, Ky., will replace south of bridge over Barren River; \$100,000.

Ky., Shelbyville.—Will erect bridge across Buck Creek; bids about Apr. 1; J. E. Robertson, Engr.

La., Alexandria.—Will build 9 bridges on Alexandria Boyce-Jena highway, including 1 over Bayou Bertam and another over Big Bayou, both 119 ft.; J. E. Ball, Contr.; Ira W. Sylvester, Parish Engr. (Lately noted inviting bids.)

La., Vidalia.—Will build bridge across Cross Bayou or Wild Cow Bayou, or both, on Black River, Concordia Parish, La.; creosote pile or steel bridge; bids until April 4; John Dale, Jr., Secy. Concordia Parish Police Jury. (See Machinery Wanted—Bridge Construction.)

Miss., Louisville.—Will build bridges over Holmes Mill, Pennyhook and Deer creeks and construct roads; bids until Mch. 7; B. M. McCully, Clk. of Winston County Suprs. (See Machinery Wanted—Bridge Construction.)

Miss., Meridian.—Will build 40-ft. and 30-ft. bridges over creek near Bishop Place; bids until Mch. 9; Geo. F. Hand, Clk. (See Machinery Wanted—Bridge Construction.)

Mo., Forsyth.—Will build bridge 492.75 ft. long over White River; \$65,790.00; Project 163, Taney County; bids until Mch. 11; R. G. Campbell, Engr. Forsyth Special Road Dist. Lately noted. (See Machinery Wanted—Bridge Construction.)

Mo., Lanagan.—Will erect bridge; Irvin Hale, Contr., 614 Jackson Ave., Joplin, Mo.; S. P. Lett, Engr., Pineville, Mo.; W. H. Legg, Presiding Judge, Pineville, Mo.

N. C., Carthage.—Will rebuild Reynolds Mill bridge over Bear Creek; bids until Mch. 7; Geo. H. Maurice, Secy. Moore County Highway Comsn. (See Machinery Wanted—Bridge Construction.)

N. C., Dunn.—Will build several concrete bridges; F. L. Grant, Contr. and Engr., Lowndes Bldg., Clarksburg, W. Va.

N. C., Raleigh.—Will build 2 steel bridges and substructures, including 220-ft. bridge, over Nuse River and 65-ft. bridge over Swift Creek; bids until Mch. 8; C. M. Miller, Highway Engr. (See Machinery Wanted—Bridge Construction.)

Okla., El Reno.—Will build 12 concrete bridges, \$50,000, including \$40,000 bridge across North Canadian River; will let contracts. Address Canadian County Comms.

Okla., Perry.—Perry County awarded bridge contracts as follows: John Alderman, \$18,500, 4 bridges; Jess E. Marshbanks, \$4000, arch bridge and spillway bridge; V. B. Curl, County Engr.

S. C., Lanes.—Will build substructure and superstructure of Santee River bridge between Williamsburg and Berkeley counties; low bidders, Simons-Mayrant Co., Charleston, S. C., at \$92,891.10 for substructure and Atlantic Bridge Co., Roanoke, Va., at \$48,694.60 for superstructure; W. K. McDowell, Chrmn. Santee Bridge Dist. Comsn., Charleston, S. C.; Ambrose Harwell, Div. Engr., 39 Broad St., Charleston, S. C. (Lately noted inviting bids.)

Tex., Fort Worth.—Will build steel bridge over Sycamore Creek in Sycamore Park; bids until Feb. 21; A. F. Bardwell, Secy. Park Comms. (See Machinery Wanted—Bridge Construction.)

Va., Radford.—Will repair bridge over New River; C. W. Hodge, Contr., Radford. Address Virginia Highway Comsn., G. C. Coleman, Commr., 116 S. 3d St., Richmond, Va. (Previously noted.)

Va., Buckingham.—Will erect concrete bridge across Norris Creek; \$10,000; D. F. Burnett & Co., Contrs., Lynchburg, Va.

## Canning and Packing Plants.

W. Va., Wheeling.—Bleifus Bros., capital \$25,000, ineptd. by Geo. L. and Edw. J. Bleifus, H. C. Gompers.

## Clayworking Plants.

Fla., Miami.—Bricks.—Standard Poured Brick Co. will erect plant on Miami Canal; daily capacity 50,000 dampproof bricks; present daily capacity 3000 bricks.

## Coal Mines and Coke Ovens.

Ky., Dalna.—Amberg Coal Co. will build coal tipples, miners' houses, etc.

Ky., Happy.—Happy Coal Co., C. L. Ryley, Prest., 1304 Fayette Bank Bldg., Lexington, Ky.; develop 500 acres coal land; present daily output 1 car; install mining machinery, tipples, etc.; B. T. Peck, Conslt. Engr., Hazard, Ky. (See Machinery Wanted—Mining Machinery; Locomotive; Tipples.)

Ky., Hazard.—Campbell Block Coal Co., capital \$50,000, ineptd. by J. G. and E. L. Campbell, R. H. Holliday.

Ky., Hombre.—Hombre Coal Co., increased capital from \$55,000 to \$100,000.

Ky., Lennut.—No. 4 Superior Coal Co., C. L. Ryley, Prest., 1304 Fayette Bank Bldg., Lexington, Ky.; develop 300 acres coal land; daily output 10 cars; construct tipples, etc. Lately noted. (See Machinery Wanted—Tipples; Scales.)

Ky., London.—Tidewater & Western Coal Co. acquired 27,000 acres land; develop for coal, timber and oil; build branch railroad.

Ky., Louisville.—China Handles, etc.—Standard Sanitary Mfg. Co., Pittsburgh, Pa., will erect additional unit to pottery plant; 1-story-and-basement 200x75-ft. building; daylight system, monitor type construction; concrete foundation, brick walls, mill-construction floors; mfrs. china handles, small fittings, etc.; E. T. Hutchesins, Archt.

Ky., Mossy Bottom.—Christie-Sowards Mining Co., Pikeville, Ky., (lately noted ineptd., capital \$20,000) organized with J. J. Christie, Prest.-Mgr.; E. H. Sowards, V.-P., Treas. and Secy.; has 2100 acres coal land under development. (See Machinery Wanted—Boiler; Building Material.)

Ky., Prestonburg.—Bailey-Ferguson Coal Co., capital \$200,000, ineptd. by James G. and Marie Bailey, S. C. Ferguson.

Ky., Providence.—Davidson-Asher Coal Co., capital \$3000, ineptd. by John S. Davidson, J. A. Foxwell, Morris Asher.

Ky., Whitesburg.—Letcher Coal & Coke Co., capital \$100,000, ineptd. by F. L. Rodgers, Virginia City, Va., and J. K. Kelley, Coeburn, Va.

Tex., Timpson.—American Fuel & Development Co., capital \$5,000,000, ineptd. with Sterling P. Strong, Prest.; B. M. Hatfield, V.-P. and Gen. Mgr.; all Dallas, Tex.; acquired holdings of Garrison Coal & Oil Co., including 1200 acres coal land at Timpson and 3659 acres oil lands in Texas, Louisiana and Oklahoma.

Va., Big Stone Gap.—Bundy Coal Co., capital \$20,000, ineptd. with A. N. Gilly, Prest., Johnsons Mill, Va.; D. P. Morrison, Jr., Secy., Vanwood, W. Va.

W. Va., Belle.—Belle Coal & Land Co., capital \$30,000, ineptd. by Joe Wehrle, Jr., Charleston, W. Va.; W. A. Shore, Geo. W. Agee, both Winston-Salem, N. C.

W. Va., Brooke County.—Windsor Power House Coal Co., Pittsburgh, Pa., capital \$500,000, ineptd. by Charles McGregor, Paul W. McQuillen, Miner W. Tuttle, all New York city.

W. Va., Clarksburg.—Seminole Gas Coal Co., main office, 1730 Penobscot Bldg., Detroit, Mich., organized with E. H. Jewett,



Prest.; E. L. Douglass, V.-P. and in charge of operations; develop mine with daily output 15 cars; equipment purchased. (Lately noted inceptd., capital \$150,000.)

W. Va., Charleston.—Cap Run Coal Co., H. C. Jones, Prest., increased capital from \$100,000 to \$200,000.

W. Va., Fairmont.—Fairmont-Lowesville Coal Co., John Y. Hite, Prest., increased capital from \$100,000 to \$300,000.

W. Va., Charleston.—Jones-Winifred Coal Co., H. C. Jones, Prest., increased capital from \$50,000 to \$125,000.

W. Va., Huntington.—Easley Coal Co., Fred. Easley, Prest., increased capital from \$75,000 to \$300,000.

W. Va., Kingwood.—Barnard Coal Co., W. O. Barnard, Prest., increased capital from \$75,000 to \$150,000.

W. Va., Junior.—Mildred Coal Co. increased capital \$50,000 to \$25,000.

W. Va., Keyser.—Low Volatile Collieries Co. increased capital from \$50,000 to \$100,000.

W. Va., Mt. Clare.—Alex. Ronay, Fayette City, Pa., acquired 80 acres coal land; will develop; equipment purchased; contemplated annual output from 70,000 to 80,000 tons.

W. Va., Newlin.—Weewin Coal Co., J. H. Baunister, Prest., increased capital from \$25,000 to \$40,000.

W. Va., Peach Creek.—Parsons Coal Co., 418½ 10th St., Huntington, W. Va., organized with A. F. Parsons, Prest.-Mgr.; Frank Adams, Secy.-Treas.; will develop 1905 acres coal land; daily output 1000 tons; install mining machinery; bids about June 1. Lately noted inceptd., capital \$300,000. (See Machinery Wanted—Mining Machinery.)

W. Va., Ohio County.—Penn-American Coal Co., Pittsburg, Pa., capital \$100,000, inceptd. by Lawrence A. Crosby, Orville W. Wood, Walter G. Weighman, all New York city.

### Concrete and Cement Plants.

Ala., Mobile.—Concrete Tile.—Baldwin Petrinite Roof Tile Co., Enos Baldwin in charge, Box 1483; has plant for mfr. of concrete roofing tiles; daily capacity 1800. Lately noted. (See Machinery Wanted—Motor.)

### Cotton Compresses and Gins.

Okla., Frederick.—Williams & Miller will probably rebuild cotton ginnery burned at loss of \$30,000.

Okla., Marlow.—Roberts Gin Co., H. L. Roberts, will construct 3 buildings; 60x24 ft., 40x24 ft. and 40x22 ft.; install \$20,000 to \$25,000 machinery. (Lately noted to rebuild burned ginnery.)

Tex., Italy.—Farmers' Gin Co. increases capital from \$15,000 to \$28,000.

Tex., Nixon.—Steve Dawes purchased Schwab plant; will enlarge and improve.

Tex., Rochester.—Farmers' Gin, Hunstman & Harcrow, owners, will probably rebuild gin burned at loss of \$10,000.

### Cottonseed-Oil Mills.

S. C., Carlisle.—Carlisle Cotton Oil Co. will probably rebuild burned plant.

### Drainage Systems.

Fla., Bradentown.—Pearce Drainage Dist., Manatee County Commrs. let contract to Thompson & Moseley, Atlanta, Ga., at \$26,000 to construct open ditches to reclaim 5480 acres; McElroy Engineering Co., Engr., Tampa, Fla. (Supersedes recent item.)

Fla., Oneco.—Lockwood Ridge Drainage Dist., Manatee County Commrs. let contract to Thompson & Moseley, Atlanta, Ga., at \$37,950 to construct open ditches to reclaim 12,860 acres; McElroy Engineering Co., Engr., Tampa, Fla. (Supersedes recent item.)

Fla., Sarasota.—Hyde Park Drainage Dist. let contract to Thompson & Moseley, Atlanta, Ga., at \$30,350.17 to construct open ditches to reclaim 7000 acres; McElroy Engineering Co., Engr., Tampa, Fla. (Supersedes recent item.)

Miss., Cleveland.—Bogue Hasty Drainage Commn., Bolivar County, let contract R. McWilliams Co., Memphis, Tenn., to construct 280,000 cu. yds. open-dredge canal costing about \$67,000; reclaiming 6500 acres for agriculture; W. W. Boone, Engr., Cleveland.

Mo., Trenton.—Grand River Drainage Dist. No. 2, H. J. Bain, Secy., Grundy County, Will issue \$225,000 bonds for drainage system.

Mo., Trenton.—Muddy Creek Drainage Dist. No. 1, J. H. Bain, Secy., Grundy County, will issue \$100,000 bonds for drainage system.

Tex., Houston.—Drainage Dist. 10, in Little York vicinity, voted \$50,000 bonds for drainage system; A. W. Coghill, G. A. Maack, William H. Shott, Commrs.

Tenn., Memphis.—Big Creek Drainage Dist. Commrs., Shelby County, let contract to Sigmond & Reinhardt, Lincolnfor S. C. to construct 18 mi. main ditch, 612,000 cu. yds. excavation. (Bids lately noted.)

Tex., Houston.—Harris County Drainage Dist. No. 8, Chester H. Bryan, Judge, let contract to J. B. Arpin at \$210,000 to construct drainage system. (Bids lately noted.)

### Electric Plants.

Fla., Fort Pierce.—Will vote Mch. 15 on \$60,000 bonds to improve electric-light and power plant. Address The Mayor. (Supersedes recent item.)

Fla., Nocatee.—Nocatee Ice & Power Co., capital \$5000, inceptd. by F. R. McConnell, C. F. Walker and H. T. Davis.

Ga., Cordele.—Will construct light and power plant in connection with City Water plant; plans voting on \$40,000 bonds; W. G. Webb, Engr.; J. Gordon Jones, Mayor.

La., Houma.—Will vote Mch. 15 on \$180,000 bonds to construct combined electric-light, water-works and filtration plant. H. M. Bourg, Mayor.

Miss., Quitman County.—Mississippi State Penitentiary, J. J. Coman, Secy., Jackson, Miss., will install electric-light plant at Camp B. O'Keefe Farm; bids opened.

Mo., Fulton.—Will vote in April on \$75,000 bonds to enlarge and improve light and water plants. Address The Mayor. (Lately noted contemplated.)

Mo., Wheaton.—Wheaton Light, Ice & Cold Storage Co., capital \$40,000, inceptd. by W. A. Davidson.

N. C., Columbia.—Issued \$10,000 bonds for electric-light system. Address The Mayor.

N. C., Connelly Springs.—Connelly Springs Light & Power Co., capital \$25,000, inceptd. by R. R. Ennis, W. J. Davis and A. C. Page.

N. C., Columbus.—Issued \$25,000 bonds for electric-light system; E. C. Watts, Mayor.

N. C., Pollockville.—Issued \$35,000 light and water bonds. Address The Mayor.

S. C., Newberry.—Issued \$18,000 bonds for electric-light system. Address The Mayor.

Va., Remington.—Electric Light & Power Co., capital \$25,000, organized with A. L. Hord, Prest.; C. W. Hoffman, Secy.; succeeds Electric Power & Milling Co.

W. Va., Huntington.—Consolidated Light, Heat & Power Co. applied for franchise to erect, maintain, etc., transmission lines for power and lighting.

### Fertilizer Factories.

Md., Salisbury.—Wicomco Farmers' Assn., capital \$50,000, inceptd. by E. Dale Adkins, Wm. C. Mitchell and Wm. M. Cooper.

Va., Richmond.—Phospho-Germ Mfg. Corp. will construct 76x66 ft. fireproof factory building; bids until Feb. 28; will install shifting pulleys, bolts and link chain conveyors; mfr. fertilizers; Fred. Brown, Constr. Eng. (Lately noted rebuild burned plant. (See Machinery Wanted—Conveyors, Sprinkler System.)

### Flour, Feed and Meal Mills.

Ga., Savannah.—Centennial Milling Co., Memphis, Tenn., will establish mill; erect 2 and 3-story 200x150-ft. brick, concrete and heavy mill-construction building, with packing capacity of 4800 bbls. every 24 hours; Artley Co., Contr.

Ky., Covington.—Ruef Bros., capital \$15,000, inceptd. by J. P. Cloke, F. G. Doyle and Oliver Huber; all Cincinnati, O.

Ky., Mayfield.—Mayfield Milling Co., capital \$50,000, inceptd. by Geo. J. Covington, W. E. Norman and Roy Morehead.

Md., Easton.—Easton Milling Co., Geo. L. Bartlett and Royce R. Spring, Owners, Harrison St., will probably rebuild plant burned at loss of \$60,000.

S. C., Timmonsville.—People's Milling & Supply Co., capital \$20,000, inceptd. with D. J. Simmons, Prest.-Secy.; C. W. Ward, V.-P. and Treas.

Okla., Checotah.—Checotah Mill & Elevator Co., capital \$10,000; J. N. Young, W. I. Cook and J. A. Hurt.

Tenn., Duck River.—Duck River Milling Co. increases capital from \$10,000 to \$25,000.

Va., Remington.—Remington Milling Co., capital \$50,000, organized with A. L. Hord, Prest.; C. W. Hoffman, Secy.-Treas.-Mgr.; succeeds Electric Power & Milling Co.

W. Va., Morgantown.—Morgantown Flour & Feed Co., capital \$100,000, inceptd. by E. W. Charbel, Elkins, W. Va.; W. M. Sommers, Clarksburg, W. Va.; I. H. Channell, Huttonsville, W. Va.

### Foundry and Machine Plants.

Ala., Birmingham.—Stoves and Ranges.—Unit Stove & Range Co., H. A. Lengfelder in charge, Belleville, Ill.; install equipment for mfr. hot-air furnaces.

Fla., Palatka.—Machine Shop.—T. J. Barnett Co., capital \$50,000, organized with T. J. Barnett, V.-P. and Mgr.; will erect building costing about \$6000; install machine shop; mch. purchased.

La., Baton Rouge.—Fire Hose Holders, etc.—D. Souther Mfg. Co., capital \$30,000, organized with D. Souther, Prest.; Fred C. Conrad, Secy.-Treas.; contemplates building plant to mfr. fire hose holders and conveyors, flange and couplings, etc. (Lately noted.)

N. C., North Wilkesboro.—Pattern-making.—Superior Mill Co., E. V. Williams, Gen. Mgr.; establish plant; mch. purchased for mfr. of patterns.

Fla., Tampa.—Saws.—Burger Repair & Construction Co., Fred T. Burger, will establish plant for mfr. of portable band saws.

Ky., Louisville.—Furnaces.—Caloric Furnace Co., capital \$15,000, inceptd. by G. S. and Arthur L. Woods, Wm. C. Emrick.

Md., Baltimore.—Culverts.—Maryland Culvert & Metal Co., William G. Baker, Prest.,

Ridgely St. near Bush St.; establish branch plant for mfr. corrugated culverts; contemplate enlarging plant.

Miss., Hattiesburg.—Culverts.—Nelsen Concrete Culvert Co., capital \$100,000, inceptd. by R. J. Orr, B. R. Thompson, W. J. Butler, all Pontiac, Ill.; establish plant for mfr. of pre-cast reinforced sectional concrete culverts.

Mo., Springfield.—Machinery.—Stewart Self-Feeder Co., J. W. Adkins, Secy., Kansas City, Mo., will remove plant to Springfield; has acquired 2-acre site with 80x110-ft. building; mfr. light mchy.

N. C., Charlotte.—Machine Shop, etc.—J. A. Arthurs will establish foundry and machine shop costing \$2900.

Okl., Duncan.—Machine Shop.—Temple Machine & Foundry Co. will establish plant to specialize in oil-field repairs; move plant from Temple, Okla.

S. C., Columbia.—Engines.—Tozer Engine Works, T. F. Dial, Prest., contemplates increasing capital to \$100,000.

Tenn., Johnson City.—Boilers, etc.—Johnson City Boiler & Tank Co., capital \$20,000, inceptd. by J. W. Williams, B. A. Coleman, Henry Ehret.

Tenn., Memphis.—Farm Tractors.—Ideal Tractor-Cultivator Co., 608 McCall Bldg., J. P. Stanton, Mgr., care of North Memphis Machine Works (lately noted to remodel purchased building for mfr. of farm tractors) invites bids on foundry equipment and material. (See Machinery Wanted—Foundry Equipment; Foundry Materials.)

Tex., Dallas.—Plumbers' Supplies.—Dallas Plumbing Co. increased capital from \$6500 to \$10,000.

Tex., Dallas.—Saws, etc.—Blanchard Saw & Machine Co., capital \$10,000, inceptd. by J. H. Blanchard, J. W. Simmons, J. C. Weaver.

Tex., Ennis.—Implements.—Gaida Tractor & Implement Co., capital \$5000, inceptd. by Wale and John Gaida, Frank Kallus.

### Gas and Oil Enterprises.

Ark., Pine Bluff.—Jefferson County Oil & Gas Co. inceptd. with Jas. Gould, Prest.; D. B. Niven, Treas.; Fred. D. Doty, Secy.

Ky., Ashland.—Emden Oil Co., increases capital from \$50,000 to \$75,000.

Ark., Stephens.—Stephens Oil & Gas Co., capital \$65,000, organized with J. B. Smith, Prest. Board of Trustees; H. G. McClurkin, Secy.—Treas.

Ky., Bowling Green.—Paola Oil Co., capital \$5000, inceptd. by E. C. Berry, O. D. Munn and John J. O'Hern.

Ky., Bowling Green.—Inagin Oil Co., capital \$20,000, inceptd. by S. K. Blanche and Elbert Warren.

Ky., Louisville.—Universal Drilling Co., capital \$250,000, inceptd. by T. S. McGrath, Emmet R. Field and E. T. Quinby.

Okl., Alva.—Triangle Distributing Co., capital \$5000, inceptd. by L. L. and Della M. Peters, both Alva; G. D. King, White Deer, Tex.

Okl., Kellyville.—Hiram Oil & Gas Co. increased capital from \$300,000 to \$500,000.

Okl., Wagoner.—Parshall Oil & Gas Co., capital \$150,000, inceptd. by L. A. Sergeant, C. W. McKeehen and E. A. Summers.

S. C., Columbia.—Columbia Petroleum Co., W. J. Keenan, Jr., Prest., contemplates increasing capital to \$35,000.

Tenn., Chattanooga.—Red Bank Development Co., capital \$25,000, inceptd. by E. E. Hubble, J. C. Choate and B. A. Cresman.

Tex., Alvin.—Brazoria Oil & Mineral Co.

increased capital from \$100,000 to \$1,000,000; formerly Brazoria County Oil & Mineral Co.

Tex., Burkburnett.—C. F. Noble Oil & Gas Co., will probably rebuild casing-head gasoline plant burned at loss of \$15,000.

Tex., Fort Worth.—Littwood Oil & Supply Co., increases capital from \$75,000 to \$125,000.

Tex., Houston.—Legion Oil Co., capital \$20,000, inceptd. by J. E. Davis, G. W. Trammell and R. M. White.

Tex., Sweetwater.—Refinery.—Sweetwater Oil Refining Co. will erect refinery; purchased site.

W. Va., Clarksburg.—Consumers' Distributing Co., capital \$100,000, inceptd. by G. D. McFadden, E. G. Gray; both Clarksburg; J. A. Miller, Nutter Fork, W. Va.

W. Va., Clendenin.—Elk River Development Co., capital \$50,000, inceptd. by F. W. Bolowicz, C. G. Carran and J. A. Bell; all 30 E. 42d St., New York.

W. Va., Huntington.—Moore Oil & Gas Co., capital \$25,000, inceptd. by Herman Moore, F. J. Klenzing, Albert F. Parsons; will install rigs; lay 10, 8½, 6½ and 5 3/16-in. casing. (See Machinery Wanted—Rig Irons.)

### Hydro-Electric Plants.

Ala., Dothan.—Will develop hydro-electric plant on Choctawhatchee River; generate 20,000 H. P.; vote Meh. 1 on \$750,000 bonds; R. W. Lisenby, City Clk. (Lately noted to vote Feb. 14.)

Ark., Cotter.—Dixie Power Co., Walker V. Powell, Prest., asks Federal Water Power Comsn. for permit to erect power plant on White River; 234 ft. high; create lake 150 mi. long, providing water transportation to points in Missouri and Arkansas.

Ga., Tifton.—Southern Water Power Co., capital \$10,000, inceptd. with John Pope, L. P. Thurman, J. B. Murrow.

Ga., Lyons.—May build concrete dam across Pendleton Creek to generate electricity for lighting and commercial purposes; 1 mi. long; \$1,000,000. Address The Mayor.

La., Alexandria.—Louisiana Gravity Canal Co. plans power development 3 mi. long across Bayou Cocodrie, Rapides and Evangeline parishes.

S. C., Greer.—Blue Ridge Power Co., J. C. Cunningham, Public Service Commr., will build power line to be owned by city; 13 mi. transmission; develop 44,000 H. P., connect Fairforest, Welford, Duncan and Greer; cost \$30,000 to \$40,000; will invite new bids about Meh. 1; W. N. Willis, Engr., Spartanburg, S. C.; W. T. Brockman, Mayor, Greer, S. C. (Lately noted.)

### Ice and Cold-Storage Plants.

Ark., El Dorado.—F. E. Roney, Prest. Chamber of Commerce, will establish 50-ton ice mfg. plant; erect concrete building; install machinery.

Ark., Hope.—Hope Ice & Fuel Co. will improve plant; installing 1000-ton capacity storage vault.

Fla., Avon Park.—Florida Ice & Power Co. will install 40-ton capacity ice plant; machinery purchased.

Fla., Nocatee.—Nocatee Ice & Power Co., capital \$5000, inceptd. by F. R. McConnell, C. F. Walker and H. T. Davis.

Mo., Wheaton.—Wheaton Light, Ice & Coal Storage Co., capital \$40,000, inceptd. by W. A. Davidson.

N. C., Shelby.—Kings Mountain Cotton Oil Co. will establish ice plant with initial capacity 10 tons daily; equipment purchased.

Va., Front Royal.—J. N. Major interested in

erecting 50,000-bbl. capacity apple cold-storage plant; invites bids. (See Machinery Wanted—Cold Storage.)

Va., Lynchburg.—Service Creamery & Ice Co., capital \$20,000, inceptd. by E. M. Blair, B. E. Hughes and J. W. Arthur.

Va., Radford.—Radford Ice Corp., Anthony Giesen, Prest., increased capital from \$75,000 to \$100,000; will erect modern cold-storage building and improve present ice mfr. and soda-water plants; electrically operated; A. S. Workman, Refrigerating Engr., Waynesboro, Pa.

### Land Developments.

Ala., Birmingham.—Will enlarge Avondale Park; purchased 4-acre site adjoining park. Address The Mayor.

Fla., Wauchula.—Wauchula Development & Mfg. Co., capital \$3,250,000, organized with J. W. Wright, Prest., Dallas, Tex.; Roma B. Rainey, Gen. Mgr.; develop 5000 acres in truck farms and citrus groves and 2000 acres in stock farm; acquired holdings of Wauchula Development Co., consisting of 50,000 acres.

Md., Worton.—Maryland Farms Co., capital \$40,000, inceptd. by Julian C., Julia N. and A. Hurlock Byrd.

Tex., Crockett.—Crockett Cemetery Assn. inceptd. by G. Q. King, R. L. Shivers, J. W. Young.

### Lumber Manufacturing.

Ala., Jackson.—C. W. Zimmerman Mfg. Co. acquired by W. T. McGowin, J. S. McVey and others; will improve plant; extend railroad 15 mi. for further development.

Fla., Campbellton.—Kelly-Foshee Lumber Co. will erect 25,000 to 30,000-ft. capacity mill with steam drykiln; machinery purchased. (Lately noted to establish sawmill.)

Okl., Clayton.—Sledge Lumber Co. will probably rebuild burned plant.

Tex., Alto.—Alto Mill & Lumber Co. increased capital from \$50,000 to \$75,000.

Tex., Del Rio.—Del Rio Lumber Co. increased capital from \$50,000 to \$100,000.

### Metal-Working Plants.

Fla., Jacksonville.—Springs.—Jones Furniture & Storage Co., 633 W. Forsythe St., contemplates installing additional department to mfr. bed springs. (See Machinery Wanted—Punching Machines.)

Ky., Paducah.—Wheels.—Lack Mfg. Co. increased capital to \$250,000 to mfr. disc wheel for automobiles.

Md., Baltimore.—Ferro-zirconium.—Zirconium Co. of America, organized with George F. Dixon, Prest.; Philip C. Spencer, V.-P.; Charles W. Smiley, 1622 Smallwood St., Secy.; Morris Meyer, Treas.; establish plant to mfr. ferro-zirconium, etc.; purchased property consisting of 6 brick buildings and 2½ acres ground; remodel.

Mo., Kirksville.—Clocks, etc.—Automatic Self-Leveling Clock Co. organized with John A. Pixter, Prest.; J. T. Dodson, V.-P.; John D. McCarty, Secy.—Treas.; John F. Janasch, Mgr.; will probably install 300,000 machinery to mfr. clock mechanisms and special clocks. (Lately noted inceptd., capital \$350,000.)

Tenn., Nashville.—Can-Opening Machine, etc.—Quicksafe Mfg. Co., capital \$100,000, inceptd. by A. L. Lawson, N. M. Tucker, I. A. O'Kain.

### Mining.

Ark., Black Rock.—Limestone.—Limestone Products Co., capital \$400,000, inceptd. by Wm.

H. Woodruff, Jonesboro, Ark.; D. S. Alessi, C. E. Scott, both of Springfield, Mo.; establish limestone quarries and develop.

Ark., Independence and Izard Counties—Limestone, etc.—Planters' Lime, Phosphate & Fertilizer Co., capital \$1,500,000, inceptd. with J. R. Alexander, Prest., Scotts, Ark.; C. G. Henry, V.-P., Newport, Ark.; R. R. Ramey, Treas. Gen., Mgr., Kensett, Ark.; J. W. Williamson, Secy., Batesville, Ark.; will develop 6000 acres; principal product ground limestone, burned and hydrated lime and commercial fertilizer; survey shows 19,602,000 tons phosphate rock and 2,243,211,200 tons limestone for mfrs. lime.

Ky., Pineville—Quarries, etc.—Pineville Stone & Quarry Co. inceptd. by T. J. Asher, J. H. Bailey, M. Bradenberg.

Md., Hagerstown—Marl.—Maryland Lime Marl Co., capital \$75,000, inceptd. by Frank D. Adams, Harry E. Bester, Thos. L. Smith.

N. C., Guilford—Copper, etc.—Guilford Mining Co., 335 Harrison Apt., Greensboro, N. C., capital \$75,000, inceptd. by J. C. White, Chas. A. Weller, R. F. Titsworth, all Knoxville, Tenn.; install mch. for mining copper, gold ore, etc.

Okla., Ponca City—Limestone.—James Gamme will develop limestone deposits; install mill and crusher.

Va., Bristol—Limestone, etc.—A. I. Hays, Secy., Chamber of Commerce, interested in proposed limestone development and glass plant.

W. Va., Proctor—Sand.—Wells Pit Sand Co., capital \$20,000, inceptd. with Otto P. and Percy M. Arriek, Proctor; Harmon D. Meredith, Clarksburg, O.

W. Va., Salt Petre—Marble and Onyx.—Virginia Marble & Onyx Co., Thomas Wid-  
dop, Secy., Treas. and Const. Engr., 230 Fifth Ave., Room 605, Pittsburgh, Pa.; will develop 207 acres; daily output 100 tons crushed marble; install crushers, motors, etc. Lately noted increased capital to \$150,000. (See Machinery Wanted—Mining Machinery.)

### Miscellaneous Construction.

Ala., Cordova—Coal Terminal, etc.—War Dept., H. T. De Bardeleben, Mgr., Warrior River Section, Inland and Coastwise Service, 714 Brown-Marx Bldg., Birmingham, Ala., let contract to Reid & Lowe, Birmingham, Ala., to construct piling, etc., for 4 coal bins having total capacity of 200,000 tons, 10,000 ft. creosoted piling, 212,000 ft. lumber for framing, costing about \$47,500; contract let to Manhattan Rubber Mfg. Co., Passaic, N. J., for conveyors, belting and other coal-handling equipment; Motley & Dryer, Engrs., Woodward Bldg., Birmingham, Ala. (Bids lately noted.)

Ala., Mobile—Tanks.—War Dept., Newton C. Baker, Secy., Washington, D. C.; will remove approximately 200,000 cu. yds. dirt and install two 55,000-bbls. capacity tanks for United States Shipping Board fuel oil station on Blakeley Island; Major Earl North, in charge; invite bids on installation of tanks when dredging is completed; probably 30 days.

La., New Orleans—Wharf.—Mississippi-Warrior Service, 322 Custom-house Bldg., let contract to Hampton Reynolds to reconstruct and improve Sanders wharf, costing \$20,000; E. V. Pickley, Supt. of Maintenance, in charge, 322 Custom-house Bldg. (Bids lately noted.)

Tex., Dallas—Levee.—Dallas County Levee Dist. No. 6 votes Feb. 28 on \$70,000 bonds to complete levee construction.

Tex., Houston—Swimming Pool.—Confen-  
plates constructing municipal swimming pool.

etc., in Hermann Park. Address Park Board Comms.

W. Va., Fairmont—Mausoleum.—Sanitary Mausoleum Co., U. J. Smith, Gen. Mgr., Masonic Bldg., Reading, Pa., will construct memorial mausoleum in Woodlawn Memorial Park; granite, marble and bronze construction.

### Miscellaneous Enterprises.

Fla., Daytona—Bicycles, etc.—Gene Johnson, 409 Beach St., will erect 2-story 20x28-ft. frame, iron-covered building; install lathe, power drill and emery grinder, air compressor for general repair shop; also install additional departments of hardware, cutlery, fishing tackle, children's toy vehicles, etc. (Lately noted.)

Fla., Fort Pierce—Construction, etc.—Fort Pierce Financing & Construction Co., capital \$500,000, inceptd. with F. C. McMullen, Prest.; G. S. Taylor, Secy.-Treas.

Fla., Miami—Incinerator.—Contemplate installing double unit incinerator with daily capacity of 30 to 40 tons, costing \$22,220; J. Kinsley Fink, Acting Prest., City Council.

Ga., Atlanta—Contractors.—A. J. Krebs Co., capital \$50,000, inceptd. by Allen J. Krebs, C. F. Nonnemaker, C. B. White.

Ga., Atlanta—Laboratory Supplies.—Sheffield Bros. Dental Laboratory Supply Corp., capital \$5000, inceptd. by John E. Arthur R. and Clara B. Sheffield.

Ga., Atlanta—Engineering, etc.—R. M. Walker Co., capital \$12,000, inceptd. by Ravenel Walker, James A. Watson, Jr., Herman E. Riddell.

Ga., Atlanta—Plumbing and Heating.—Standard Plumbing & Heating Co., capital \$5000, inceptd. by R. O'Hara, W. A. Dedmond, P. K. Hayne.

Ga., Atlanta—Laundry and Dry Cleaning.—French Dry Cleaning Co., May & Sons, Props., will erect 45x120-ft. brick building; cement floor; gravel roofing, costing \$15,000; construction by day labor; E. C. Seiz, Archt., 365 Healey Bldg.

Ky., Elizabethtown—Publishing.—News Mirror Printing Co., capital \$15,000, inceptd. by H. A. and C. E. Somers, W. C. Montgomery.

Ky., Louisville—Elevator.—Pittsburgh Fuel Co. will erect \$5000 elevator.

Ky., Louisville—Construction.—Struck Construction Co., capital \$75,000, inceptd. by Fred R. De Leuil, F. F. Schoettler, M. P. Nichol.

Ky., Owensboro—Laundry.—Model Laundry increased capital from \$5000 to \$20,000.

Md., Baltimore.—American Investigation Corp., Calvert Bldg., inceptd. by D. List Warner, John S. Short, Leslie E. Mihn.

Md., Baltimore—Greenhouses.—Akehurst & Sons, 1610 Keyser Bldg., capital \$225,000, inceptd. by L. Ruth Ewell, Bessie M. Williams, Elsie E. Hoch.

Miss., Hattiesburg—Advertising.—Walker Co., capital \$10,000, inceptd. by Ewing A. Walker, C. Grower Meador, E. H. Thomasson.

Miss., Jackson—Electrical Supplies.—Cable-Irby Co., capital \$100,000, organized with T. B. Cabell, Prest.; S. Cart C. Irby, V.-P.; R. O. Jones, Jr., Secy.-Treas.

Mo., Sedalia—Incinerator.—Will install garbage-reduction plant; has selected site; voted \$30,000 bonds in 1919. Address The Mayor.

Mo., Springfield—Printing, etc.—Inland Printing & Binding Co. increased capital from \$7000 to \$84,000.

Mo., Springfield—Advertising.—Olendorf Advertising Co., capital \$10,000, inceptd. by G. E. Olendorf, R. E. Lee, D. E. Shultz.

N. C., Burlington—Deleo Farm Lighting.—Burlington Electric Co., capital \$25,000, organ-

ized with W. J. Graham, Prest.; J. A. McGilnay, V.-P.; C. H. Rudd, Secy.-Treas. and Mgr.; let contract to Odus Thompson to erect 1-story 20x30 ft. brick building costing \$11,000; install mch. (Lately noted.)

N. C., Chapel Hill—Laboratory.—Government Warren E. Hall, Dist. Supvs. of United States plans to construct model hydraulic laboratory; Geological Survey; Thorndyke Saville, Hydraulic Engr., in charge.

N. C., Greensboro—Engraving.—J. J. Blue Engraving Co., 214 N. Elm St., organized with Jack J. Blue, Prest.-Mgr.; A. L. Larmore, V.-P.; J. B. Leather, Secy.-Treas.; will install mch., costing \$5000; has building. (Lately noted inceptd., capital \$25,000.)

Okla., Durant—Hardware.—Abbot Brooks, French Hardware Co. increased capital from \$7000 to \$10,000.

Okla., Muskogee—Home Building.—Muskogee Home Building Co., capital \$100,000, inceptd. by R. L. Daugherty, F. N. Hill, H. O. Valeur.

Okla., Perry—Publishing.—Sentinel Publishing Co. reorganized; purchased equipment to remodel plant.

S. C., Marion—Potato Curing.—Chamber of Commerce interested in establishing sweet-potato curing-house.

Tenn., Nashville—Construction.—Ranson Construction Co., capital \$25,000, inceptd. by John B. Ranson, R. E. Donnell, R. T. Wilson.

Tex., Dalhart—Publishing.—Dalhart Publishing Co. organized with Clifford Brady, Prest.; Marcella Walker, V.-P.; C. Herbert Walker, Secy.-Treas. and Mgr. (Lately noted inceptd.)

Tex., Dallas—Incinerator.—Will vote in Apr. on \$200,000 bonds to construct garbage incinerator; Hal Moseley, City Commr. (Lately noted contemplated constructing 3 disposal plants.)

Tex., Dallas—Publishing.—Southern Publishing Co. increased capital from \$80,000 to \$100,000.

Tex., Fort Worth—Laundry.—Service Cleaning & Family Wash Co., capital \$10,100, inceptd. by J. Phillips, G. H. Mulkey, A. Foute.

Tex., Fort Worth—Advertising.—Herndon-Johnson Advertising Co., capital \$3000, inceptd. by E. J. Herndon, C. C. Johnson, J. P. Millican.

Tex., Houston—Hardware.—Archer Coffey Hardware Co. increased capital from \$19,000 to \$25,000.

Tex., Ranger—Construction.—W. D. Moseley Construction Co., capital \$25,000, inceptd. by J. R. Burke, W. D. and M. E. Moseley.

Va., Alexandria—Bus Line.—Colonial Motor Bus Line, capital \$2500, inceptd. with Leonard S. Sheads, Prest.; William M. Gorman, Secy.; operate bus line between Washington, Alexandria and Mount Vernon.

W. Va., Charleston—Incinerator.—Contemplates voting bonds for purchase and installation of garbage disposal plant; H. H. Smallridge, Chrm. of Committee. (Lately noted.)

W. Va., Clarksburg—Construction and Engineering.—Hanley Construction & Engineering Co., capital \$25,000, inceptd. by E. A. Hanley, E. L. Spraker and W. L. Moke.

W. Va., Clarksburg—Music.—Hayes-Long Music Co., capital \$25,000, inceptd. by E. J. Hayes, E. G. Long and C. C. Davis.

W. Va., Martinsburg—Fruit Growers' Supplies.—Potomac Fruit & Supply Co., capital \$50,000, inceptd. by M. W. Fulton, Prest., Cherry Run, W. Va.; W. B. Connell, Martinsburg, W. Va.

W. Va., Williamson—Engineering.—Meiring, Hicks & Co., capital \$75,000, inceptd. by T. P. Meiring, H. T. Hicks, G. F. Clevenger.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



## Miscellaneous Factories.

Ala., Birmingham — Paper. — Merchants' Paper Stock Co., capital \$10,100, inceptd. with Jos. J. Winter, Prest.; E. J. Brand, Secy.; H. C. Winter, Treas.

Ala., Birmingham — Creamery. — City Creamery Co., capital \$30,000, inceptd. by M. Smith, M. G. Bardwell and E. C. Robinson.

Ala., Birmingham — Drugs. — Madison Drug Co., capital \$6300, inceptd. with W. C. Bentley, Prest.; C. K. Andrews, Secy.-Treas.

Ark., Little Rock — Rice. — Stuttgart Rice Co., capital \$16,800, inceptd. by R. S. Rhodes, Fred. and Frank Bueker.

Fla., Tallahassee — Creamery. — Leon County Milk Co., capital \$25,000, inceptd. with L. R. Bradley in charge; install creamery and cold-storage plant machinery; daily output milk, ice cream and butter. (See Machinery Wanted—Creamery Machinery, etc.)

Ga., Atlanta — Drug Specialties. — Drug Specialties Co., capital \$7500, inceptd. by J. L. Conrsey and O. L. Timothy.

Ga., Register — Turpentine. — Metter Naval Stores Co., capital \$7500, inceptd. by J. L. Conrsey and O. L. Timothy.

Ky., Covington — Bakery. — Flaherty Baking Co., capital \$50,000, inceptd. by J. A. Flaherty, Sebastian Baur and F. G. Boss.

Ky., Louisville — Paints. — Becker-Tabb Paint Co., capital \$20,000, inceptd. by C. H. Becker, J. Preston Tabb and John Manly.

La., Plaquemine — Syrup and Sugar. — Granada Syrup & Sugar Co., capital \$125,000, inceptd. with Oscar Richard, Sr., Prest., Sunshine, La.; Edmond Beene, Secy.-Treas., Plaquemine.

La., Shreveport — Optical Goods. — Hayden Optical Co., capital \$10,000, inceptd. by L. H. Hayden and L. A. Flesher.

Md., Baltimore — Clothing. — Henry Sonneborn & Co., Pratt and Paca Sts., increased capital to \$2,500,000.

Md., Baltimore — Rubber. — Allied Rubber Companies, Calvert Bldg., inceptd. by Wm. Leary, Jas. A. Curtis and Leslie E. Mihm.

Md., Baltimore — Patent Medicines. — Consolidated Remedy Co., Roy V. Tidings, Prest.; leased 4-story building at 46 S. Charles St.; will alter and install equipments; total cost \$50,000; mfr. patent medicines.

Md., Baltimore — Bottling. — Julo Bottling Co., 1268 E. North Ave., capital \$25,000, inceptd. by Louis Miller, Rosa and Ezekiel C. Fox.

Md., Baltimore — Drugs. — Ad-Tone Medicine Co., 3 E. Lexington St., capital \$100,000, inceptd. by Frank E. Welsh, Jr., Albert K. Sherman and Robt. E. Lee Young.

Md., Baltimore — Creamery. — Hendler Creamery Co., 1100 E. Baltimore St., increased capital from \$100,000 to \$400,000. (Lately noted to erect addition.)

Md., Crisfield — Clothing. — Crisfield Mfg Co. will erect \$20,000 factory building.

Md., Curtis Bay — Commercial Alcohol. — United States Industrial Chemical Co. will erect plant addition at Stonehouse Cove; 180x60 ft. building.

Md., Hyattsville — Dairy Products. — Maryland and Virginia Dairymen's Co-operative Assn., inceptd. by Frank S. Walker, John G. Thompson and Theodore C. Shafer.

Mo., Chillicothe — Rugs, etc. — Wm. H. Farrell, Philadelphia, Pa., contemplates establishing carpet and rug factory.

Mo., St. Louis — Showcases, etc. — H. Pauk & Sons, 1309 N. 15th St., will construct one-story 50x20-ft. factory addition; brick;

Wedemeyer & Nelson, Archts., Wainwright Bldg.; Aug. Winkel, Gen. Contr., 1810 N. Leffingwell Ave.

N. C., Burlington — Bakery. — Rice Burlington Bakery organized with R. M. Rice, owner; plans installing equipment.

Okla., Perry — Creamery. — Kauffman Creamery Co. will remodel plant and install machinery; increase daily capacity to 1500 lbs. butter and 300 gals. ice cream.

S. C., Columbia — Calendars. — Bingham-Hogan Co., 1540 Main St., organized with Wm. P. Hamrick, Prest.; Thos. W. Brigham, Secy.-Mgr.; Thos. P. Hogan, Treas.; install printing, cutting, stamping, embossing and turning machinery; mfr. and assemble art and commercial calendars, wood and paper specialties; invites bids. Lately noted inceptd., capital \$10,000. (See Machinery Wanted—Printing Machinery, etc.)

Tenn., Chattanooga — Fritz & Bell Mfg. Co., capital \$15,000, inceptd. by A. H. Bell, Wm. P. Fritz and W. S. Griscom.

Tenn., Chattanooga — Candy. — American Candy Co., H. L. Fine, acquired Southern Candy Mfg. Co.'s plant; has building. (Lately noted increased capital.)

Tenn., Nashville — Shoes. — Maxwell House Shoe Co., capital \$75,000, inceptd. by H. N. Thornton, Douglas Henry and Joe T. Howell.

Tex., Dallas — Drugs. — Greiner-Kelly Drug Co. increases capital from \$150,000 to \$500,000.

Tex., Dallas — Batteries. — Tennant Bros. increases capital from \$20,000 to \$25,000; formerly Texas Battery Co.

Tex., Dallas — Coffee and Tea. — Dallas Coffee & Tea Co. increases capital from \$5000 to \$40,000.

Tex., Fort Worth — Bottling. — Electrified Water & Bottling Co., capital \$10,000, inceptd. by A. S. Carruthers, N. S. Longabaugh, V. M. Flanagan.

Tex., Galveston — Ribbons. — Ribbon Works organized with J. D. Claitor, Prest.-Mgr.; O. E. Claitor, Secy.; J. H. Hardie, Treas.; install \$12,000 machinery; mfr. typewriter, adding machine and multigraph ribbons, carbon paper, etc. Lately noted inceptd., capital \$30,000. (See Machinery Wanted—Inking Machinery; Carbon-coating Machinery; Dies and Chemicals; Boxes, etc.)

Tex., McKinney — Mattresses. — McKinney Mattress Factory will probably rebuild plant burned at loss of \$1000.

Tex., Ranger — Ice Cream. — Hub Ice Cream & Storage Co., capital \$50,000, inceptd. by W. J. McFarland, J. W. Jennings, H. G. Lay.

Tex., San Antonio — Serum. — Cattleman's Serum Co. increases capital from \$25,000 to \$50,000.

Tex., San Antonio — Coffee. — Tucker Coffee Co., capital \$25,000, inceptd. by H. W. and H. H. Tucker, W. E. Hayman.

Tex., Waelder — Bottling. — Waelder So-Cola Bottling Works, capital \$5,000, G. O. McFarland, H. H. Vaughan, C. L. Halbrook.

Va., Alexandria — Hats. — Brodt Bros., capital \$50,000, inceptd. by Wm. Paul and E. Jack Brodt, Leon F. Cooper; all Washington, D. C.

Va., Lynchburg — Glass. — Lynchburg Glass Works will improve plant; install additional machinery.

W. Va., Martinsburg — Paints, etc. — Entler & Mudge Co., Feller's Hall Bldg., capital \$35,000, inceptd. by E. E. Entler, Geo. E. Mudge and A. H. Stanley.

W. Va., Nitro — Bottling. — Nitro Ice & Bottling Co., capital \$125,000, inceptd. by J. K. Moss, W. R. Ellis and C. L. Handley.

## Motor Cars, Garages, Tires, Etc.

Ala., Florence — Garage. — Miller-Buick Co., Chas. F. Miller, Propr., will rebuild garage; 75x170 ft.; fireproof; \$25,000 to \$30,000; install garage equipment. Lately noted. (See Machinery Wanted—Building Materials; Garage Equipment.)

Ark., Fort Smith — Automobiles. — Light Car Sales Co., capital \$10,000, inceptd. with W. A. Strozler, J. C. McCord, J. C. McCord.

Ark., Jonesboro — Motors. — Griffith Motor & Sales Co., capital \$50,000, inceptd.

Ark., Little Rock — Automobile Mfg. — Arkansas Mfg. Co., capital \$10,000, inceptd. with D. O. Kirkland, F. L. Oilar, C. H. Munson.

D. C., Washington — Garage. — Frederick Carl will erect \$5000 garage.

Fla., Jacksonville — Garage. — R. B. Parrimore will erect \$12,000 garage; 2 story; frame.

Fla., Jacksonville — Garage. — Will construct frame addition 30x97 ft. to city garage; bids until Mar. 4; plans, etc., on file in Engineer Dept.; John S. Bond, Chrmn. City Comsn.

Ky., Greenup — Automobiles. — Leslie Motor Co., capital \$3000, inceptd. with Charles Sowards, John L. Sowards, P. J. Leslie.

La., New Orleans — Garages. — Standard Motor Accessories & Garage Corp., recently organized, will erect two 9-story garages and service stations with clubrooms, bureaus of information for tourists, etc.

Md., Baltimore — Service Station. — A. R. White, 2 E. Lexington St., will alter automobile service station; \$30,000.

Mo., Kansas City — Garage. — D. L. Piggot, 12th and Prospect Aves., will erect garage; 1 story and basement; 113x144 ft.; brick; stone trimming; composition roof; W. E. Harris, Asso. Archt., 210 N. 5th St., Kansas City, Kansas.

Mo., Independence — Motors. — Select Motor Co., capital \$5000, inceptd.

Mo., Joplin — Motors. — Hudson-Hudges Motor Co., capital \$50,000, inceptd. with Jas. T. Hughes, W. H. Withrow, G. C. James.

Mo., Kansas City — Service Station. — Geo. W. Tourtellot will erect tire sales and service building.

Mo., Kansas City — Automobiles. — Bird Sykes Bunker Co. inceptd. with Arthur S. Bunker, Mgr.

Mo., Kansas City — Motors. — Kagey Motor Co., capital \$100,000.

Mo., Kansas City — Motors. — Front Drive Motor Co., capital \$200,000, inceptd. by Albert I. Beach.

Mo., Kansas City — Motors. — Kirkland-Gravens Motor Co., capital \$500,000, inceptd.

Mo., Kansas City — Tires. — Falls Tire Co., 1321 Grand Ave., capital \$10,000, inceptd. with Chas. N. Bush.

Mo., St. Louis — Automobile Accessories. — Tornado Automobile Pump Co., capital \$100,000.

Mo., St. Louis — Motors. — Holmes Motors, capital \$50,000, inceptd.

Mo., St. Louis — Motor Trucks. — Boehl Motor Truck Co., 3104 Locust St., capital \$25,000, organized with J. L. Boehl, Prest.-Treas.; P. H. Fuchs, V.-P.; T. Wagner, Secy.

Mo., St. Louis — Motor Cars. — Strauss Motor Car Co. will erect service station.

Mo., St. Louis — Automobiles. — Louis J. Doerr Motor Works Co., capital \$40,000, inceptd. with J. B. Ruschoff, 1328 S. 8th St.

Mo., Springfield — Motors. — Carbide Motor Co., capital \$100,000, inceptd. with A. B. Lovan.

Mo., Trenton — Automobiles. — Trenton Buick Co., capital \$25,000, inceptd. with Arthur H. Hyde.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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N. C., Ayden—Automobile Accessories.—Automotive Parts & Mfg. Co., capital \$10,000, ineptd.

N. C., Charlotte—Tractors.—Cole Tractor Co., capital \$25,000, ineptd. with E. A. Cole.

N. C., Charlotte—Tractors.—S. A. Ryan & Co., 303 E. Trade St., capital \$200,000, chartered with S. A. Ryan, G. G. Ryan, W. J. Grant.

N. C., Dunn—Garage.—City Garage will erect building.

N. C., Greenville—Automobile Accessories.—Greenville Storage Battery Co., capital \$50,000, ineptd. with W. G. Downing.

Okla., Ardmore—Motors.—Mechanics' Motor Co., capital \$100,000, ineptd. with W. F. Oakley, M. T. Steele, J. C. Nelson.

Okla., Henryetta—Trucks.—Chappell Truck Co., capital \$25,000, ineptd. with G. W. Chappell, B. O. Beemer, L. G. Gosper.

Okla., Oklahoma City—Garage.—A. Gordon, 1723 W. 11th St., will erect garage; 1 story; frame.

Okla., Perry—Garage.—Houston & Barnett will erect 50x75-ft. addition to garage; brick, tile and stone; steel trussed roof.

Okla., Sapulpa—Garage.—H. Bartlett will erect garage; F. E. Shaffer, Contr., \$5000.

Okla., Tulsa—Motors.—Tulhoma Motor Co., capital \$1000, ineptd. with Jas. Coburn, V. Goble, C. E. Olander.

S. C., Anderson—Filling Station.—Petroleum Oil Co., South Main and River Sts., will rebuild filling station.

Tenn., Knoxville—Automobiles.—Tennessee Finance Corp., capital \$100,000, organized with Grover C. Davis, Pres.; R. G. Wright, Secy.; R. W. Perry, Treas.

Tenn., Morristown—Filling Station.—People's Service Station, Memphis, Tenn., will erect filling station; 1 story; 20x38 ft.; brick.

Tenn., Nashville—Motors.—Motor Shop, capital \$5000, ineptd. with L. B. Downstein, Leroy Friedlander, Leo Goodman.

Tex., Amarillo—Motors.—Markham Motor Co., capital \$100,000, ineptd. with W. M. Williams.

Tex., Dallas—Garage.—Lamberti Motor Co., Main and Washington Sts., will rebuild garage.

Tex., El Campo—Filling Station.—Magnolia Oil Co. will erect oil and gasoline filling station.

Tex., El Paso—Automobiles.—El Paso Packard Motor Co., 691 Texas St., ineptd. with A. S. Tatum, Z. U. Mason, Ed. Dugan.

Tex., El Paso—Motors.—J. C. Jarrett Motor & Finance Co., capital \$20,000, ineptd. with J. C. Jarrett, A. E. Kingston, D. C. Stelson.

Tex., Fort Worth—Service Station.—North Main Service Station, Hal B. Hunter, Mgr., 1421 N. Main St., will erect service station; 28x72 ft.; fireproof; Fred. Taylor, Contr. (See Machinery Wanted—Air Compressors.)

Tex., Houston—Automobiles.—Maxwell Driverless Automobile Co., capital \$3000, ineptd. with J. R. Tenison, Jr., W. H. Tenison, Mrs. J. T. Tenison, Jr.

Tex., Hondo—Garage.—Yantis Motor Co. will probably rebuild garage; loss \$8000.

Tex., Miami—Filling Station.—Co-operative Oil Co. will erect filling station and storage tank. Address C. P. Pursley.

Tex., San Antonio—Automobiles.—Paige Motor Co., capital \$50,000, ineptd. with F. O. and Mary A. Davidson, J. A. Treadway.

Tex., San Antonio—Motors.—Lewis-Morris-Costley Co., capital \$50,000, ineptd. with L. D. Lewis, John B. Morris, W. G. Costley.

Tex., Seymour—Garage.—F. L. Knight will remodel garage.

Tex., Teague—Motors.—Alderman-Clark Motor Co., capital \$12,000, ineptd. with Dave Alderman, Townsend Clark, R. M. Thompson.

Tex., Waco—Motors.—Central Motor Co. increases capital from \$75,000 to \$125,000.

Tex., Waco—Garage.—D. C. Hill will probably rebuild garage.

Tex., Waco—Motors.—Brazos Motor Co., capital \$20,000, ineptd. with Ed. L. G. and G. W. McCullough.

Tex., Weatherford—Garage.—Oscar Jones will erect showroom and service repair shop; R. E. Knox, Contr.

Tex., Wichita Falls—Filling Station.—H. C. Ferruman will erect filling station; 2 stories; 44x20 ft.; brick.

Tex., Yorktown—Motors.—Yorktown Motor Co., capital \$10,000, ineptd. with H. R. and J. R. Frohes, S. Schiwetz.

Va., Norfolk—Garage.—Lowenberg-Goodman Corp., Columbus Bldg., will erect garage.

Va., Winchester—Automobile Tires.—Harlow Tire Co., Washington, D. C., plans automobile tire factory.

W. Va., Charleston—Motors.—Motor Supply Co., capital \$150,000, ineptd. with E. P. Summers, I. Duffield, Geo. D. Cochran, W. D. Harold.

W. Va., Logan—Garage.—J. W. Fisher will erect 40x86-ft. garage.

W. Va., Bluefield—Garage.—W. L. Mustard will erect garage; 1 story.

W. Va., Wheeling—Garage.—Wetly-Buick Co., 1413 Main St., will erect 2-story front and 2-story rear 68x125-ft. garage; ordinary construction; M. Gelsey, Archt.

W. Va., Wheeling—Garage.—West Virginia Motor Sales Co., 329 Market St., plans to construct garage and repair shop.

### Railway Shops, Terminals, Roundhouses, Etc.

Ga., Southover—Atlantic Coast Line R. R., W. H. Willoughby, Ch. Engr., Wilmington, N. C., will construct \$150,000 roundhouse 150 yds. in diameter and will contain tracks and pits for 25 locomotives in addition to repair pits; reinforced concrete; R. J. Whalley, Contr., Savannah, Ga.

Mo., St. Louis—Missouri Pacific R. R., E. A. Hadley, Ch. Engr., will probably rebuild burned shops; loss \$150,000.

### Road and Street Construction.

Ala., Pratt City.—May pave E. Thomas Rd.; \$160,000. Address The Mayor.

Ala., Birmingham.—Awarded paving contracts as follows: Dunn Construction Co., \$13,719.80, 11th Ave. South; H. L. Mullarkey, \$11,467.91, Bush Blvd., 20th St., etc.; H. S. Ryall, City Clk. (Lately noted.)

Ark., Powhatan.—Will construct 28 mi. gravel and plain concrete road in Walnut Ridge-Alicia Road Improvement Dist., Lawrence County; bids until Feb. 28; Dickinson & Watkins, Engrs., Walnut Ridge, Ark., and Little Rock, Ark. (See Machinery Wanted—Road Construction.)

Fla., Arcadia.—Will construct hard-surfaced roads; may vote on \$100,000 bonds. Address De Soto County Comms.

Fla., Iverness.—Will construct 2000 ft. concrete sidewalk; bids until Feb. 18; S. L. Lloyd, Town Clk. (See Machinery Wanted—Paving.)

Fla., Jacksonville.—Will construct 554 sq. yds. tile sidewalks and 33 sq. yds. concrete sidewalk; bids until Meh. 4; John S. Bond, Chrmn. City Comn. (See Machinery Wanted—Paving.)

Fla., Palatka.—Will construct sidewalk

aprons, consisting of 48 sidewalk aprons of 8 sq. yds. each; bids until Meh. 1; John H. Randolph, Supt. Public Works. (See Machinery Wanted—Paving.)

Fla., St. Petersburg.—Will grade, curb and pave streets with vitrified brick, including 11th Ave., N. 12th St., Crown Ave. and others; bids until Meh. 7; G. B. Shepard, Director of Finance. (See Machinery Wanted—Paving.)

Fla., Titusville.—Will construct road to Ocean Beach; 12½ mi.; road to Orinso, on Merritt Island, etc.; will sell \$175,000 bonds; N. T. Froscher, Clk. Brevard County Comms.

Ga., Cedartown.—Will construct roads; vote Meh. 15 on \$400,000 bonds; John K. Davis, Chrmn. Polk County Comms. Roads and Revenues. (Lately noted.)

Ga., Ringgold.—Will construct 8¼ mi. chert-surfaced road between Ringgold and Tennessee State line, known as Blue Ford Rd., Section A of Project 71; bids until Meh. 18; L. R. Wiggins, Chrmn. Catoosa County Commissioners. Roads and Revenues. (See Machinery Wanted—Road Construction.)

Ga., Sylvester.—Will grade 14½ mi. 30-ft. road from Sylvester to Colquitt County line on Sylvester and Moultrie road; Davis Construction Co., Contr., Macon, Ga.

Ky., Covington.—Will pave streets and sidewalks; bids about Meh. 1; W. W. Stewart, Engr.; Ben Vastine, Comm. Public Works.

Ky., Frankfort.—Will grade and pave streets; bids about Apr. 1; J. S. Boggs, Commissioner State Highway Comsn.

Ky., London.—Will pave and grade roads in Laurel County; new bids about Meh. 1; J. S. Boggs, Commr. State Highway Comsn., Frankfort, Ky.

Ky., Louisville.—Will construct sidewalks in Glenwood Pl. and North Park; Samuel T. Mann, City Engr.

Ky., Paducah.—Will construct and reconstruct driveways on Broadway from E. property line of 17th St. to west property line 25th St.; concrete, tarvia, Kentucky rock asphalt; bids until Feb. 28; F. W. Katterjohn, Commr. Public Affairs; W. M. Mitchell, City Eng. Lately noted. (See Machinery Wanted—Paving.)

Ky., Pineville.—Will widen streets around courthouse, etc.; \$11,500; Davis & Graham, Contrs. Address The Mayor.

Ky., Pineville.—Bell Lodge No. 300, I. O. O. F., will construct 600-ft. water-bound macadam road; John A. Bailey & Co., Contrs.

Ky., Whitesburg.—Will construct highway from Jenkins, through Cumberland Mountain; 19 mi. Address Letcher County Comms.

La., Alexandria.—Will construct sidewalks and curbing on Levin St.; bids until Meh. 7; rejected previous bids; V. M. Ake, City Secy. (Lately noted inviting bids.)

La., Alexandria.—Will pave sidewalks with concrete and construct curbing with cement on east side of 14th St.; sidewalks with concrete on both sides of 7th St.; bids until Meh. 7. Address V. M. Ake, City Secy. (See Machinery Wanted—Paving.)

La., Lafayette.—Standard Oil Co. will improve and gravel Ave. B. and 15th St.

La., Lake Charles.—Will pave Clarence St. from Hodges to Common St.; received bid from John Ritchie; J. A. Trotti, Mayor. (Lately noted inviting bids.)

La., Opelousas.—Will construct 3.55 mi. Opelousas-Arnaudville Highway; St. Landry Parish; bids until Meh. 2; Frank M. Kerr, Ch. State Highway Engr., Prest. Board State Engineers, 332 Maison-Blanche Annex, New Orleans, La.; L. Durio, Parish Engr., Opelousas, La. (See Machinery Wanted—Road Construction.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

La., Shreveport.—Will pave Herndon Ave. from City to Market St.; asphaltic concrete; bids until Feb. 23; J. C. Flanagan, City Secy.-Treas. (See Machinery Wanted—Paving.)

Md., Baltimore.—Will pave streets; contract to Waverly Paving Co., 7 Alsquith St., and Baltimore Asphalt Block & Tile Co., 1329 N. Monroe St. (Lately noted inviting bids.)

Md., Baltimore.—Will grade, curb and pave streets listed in Contracts 182-OC and 183OA; sheet asphalt on concrete base; bids until Feb. 2; R. Keith Compton, Chrmn. Paving Commn., 214 E. Lexington St. (See Machinery Wanted—Paving.)

Md., Baltimore.—State Roads Commn., 601 Garrett Bldg., will receive bids until Feb. 1 for oiling five sections State Highway, requiring 629,486 gals. oil, as follows: Div. 1, Dorchester, Wicomico, Somerset and Worcester counties, 290.96 mi., 51,313 gals.; Div. 2, Cecil, Kent, Queen Anne's, Talbot and Caroline counties, 83.77 mi., 162,242 gals.; Div. 3-5, Montgomery, Howard, Carroll and Frederick counties, 39.37 mi., 73,544 gals.; Div. 4-7, Baltimore, Harford and Anne Arundel, 64.88 mi., 133,950 gals.; Div. 6, Frederick, Allegany, Garrett and Washington counties, 124.73 mi., 199,437 gals.

Md., Belair.—Will construct 2.25 mi. concrete road from Bethel Church to Black Horse; Harford County, Contract H-25; bids until Feb. 8; L. H. Stewart, Secy. State Roads Commn., 601 Garrett Bldg., Baltimore. (See Machinery Wanted—Road Construction.)

Md., Cumberland.—Will construct 1.4 mi. concrete road from Morantown to Allegany; Allegany County, Contract A-38; bids until Feb. 8; L. H. Stewart, Secy. State Roads Commn., 601 Garrett Bldg., Baltimore. (See Machinery Wanted—Road Construction.)

Md., Easton.—Will construct 2 mi. concrete road from end Contract T-11 toward Easton; Talbot County, Contract T-14; bids until Feb. 8; L. H. Stewart, Secy. State Roads Commn., 601 Garrett Bldg., Baltimore. (See Machinery Wanted—Road Construction.)

Md., Frederick.—Will construct 16 mi. road in Frederick County; will invite bids in Feb. Address John N. Mackall, Chrmn. State Roads Commn., 601 Garrett Bldg., Baltimore.

Md., Snow Hill.—Will construct 2.6 mi. concrete road from Showell to Delaware State Line; Worcester County, Contract Wo-38; bids until Feb. 8; L. H. Stewart, Secy. State Roads Commn., 601 Garrett Bldg., Baltimore. (See Machinery Wanted—Road Construction.)

Miss., Greenwood.—Will improve public highway from Catfish bridge, near Sidon, in Dist. No. 5, to Holmes County line; will let contract. Address LeFlore County Commrs.

Miss., Louisville.—Will construct roads and bridges; bids until Feb. 7; P. M. McCully, Clk., Winston County Supers. (See Machinery Wanted—Road Construction.)

Miss., Pascagoula.—Will construct hard surfaced road; vote Feb. 11 on \$180,000 bonds. Address Jackson County Commrs.

Miss., Senatobia.—Awarded road contracts as follows: T. D. Callahan road from Thyatira to Wyatte; Lee Williamson, road from Senatobia. Address Tate County Supervisors, M. T. Thompson, Clk. (Lately noted inviting bids.)

Miss., Starkville.—Will complete and improve Osborn and Mahow roads; voted Feb. 8 on \$18,000 bonds; E. C. Thomas, Engr.

Mo., Bowling Green.—Will construct 2.5 mi. road, State aid Project S 20-21, Pike County; received bids from C. P. O'Reilly, St. Louis; C. T. Land Co., St. Louis, and others. Address State Highway Dept., Jefferson City, Mo. (Lately noted inviting bids.)

Mo., Galena.—Has completed plans for improvement of State roads in Stone County;

main road 49 mi. long and other road is 7.2 mi. in length; will issue \$100,000 bonds; H. P. Moberly, Div. Engr., Springfield, Mo. (Previously noted.)

Mo., Hartsville.—Will improve 7½ mi. Springfield-Memphis road in Wright County; \$37,000; will invite bids; H. P. Moberly, Div. Engr., Springfield, Mo.

Mo., Huntsville.—Will construct 1.66 mi. concrete or brick road; Project No. 22; bids until Feb. 28; changed date from Jan. 20; Carl Haynes, County Engr. (Lately noted. (See Machinery Wanted—Road Construction.)

Mo., Independence.—Will improve Daniel Joyce Memorial Road; \$50,000. Address Jackson County Commrs.

Mo., Linneus.—Will grade and construct roads, Federal aid Project 20-21, Linn County; Diemer & Williamson Construction Co., Contractor, Brookfield, Mo.

Mo., Shelbyville.—Will construct roads in Shelbyville and Bethel Special Road Dist.; vote Feb. 2 on \$10,000 and \$7000 bonds. Address Shelby County Commrs.

Mo., Mt. Vernon.—Will construct roads, Project No. 42; 10.43 mi.; culverts and bridges; bids until Feb. 4; W. R. Shanklin, Engr., Sedalia, Mo. (See Machinery Wanted—Road Construction.)

Mo., Neosho.—Will improve roads; voted \$22,000 bonds. Address Newton County Commissioners.

Mo., Webster Groves.—School.—Voted \$163,000 school bonds; Fred J. Horst, Member Board of Education. (Lately noted to vote.)

Mo., Warrensburg.—Will construct roads and bridges; Project No. 10; 1.65 mi.; bids until Feb. 25; J. W. Wilson, County Engr. (See Machinery Wanted—Road Construction.)

N. C., Dunn.—Will improve streets and complete water and sewer systems; issue \$50,000 bonds. Address The Mayor.

N. C., Hamlet.—Will pave streets; plan voting on \$100,000 bonds. Address The Mayor.

N. C., Hendersonville.—Will pave streets; \$1,000,000; Davidson-Grennell Co., Contr., West Palm Beach, Fla.; J. Mack Rhodes, Mayor. (Lately noted.)

N. C., Marion.—Will construct 5½ mi. highway from Cherry Springs in Crook Creek Township, McDowell County to Stone Mountain Church; bids until Feb. 7; Hugh F. Little, Chrmn. McDowell County Highway Commn.; J. L. Martin, Engr., Bridgewater, N. C. (See Machinery Wanted—Bridge Construction.)

N. C., Monroe.—Will pave streets; \$150,000; invites bids; J. C. Sykes, Mayor; Smith & Klutz, Engrs., Salisbury, N. C. (See Machinery Wanted—Paving.)

N. C., Rutherfordton.—Will pave streets; 2.2 mi.; \$100,000; Geer Wilson Co., Contr.; W. W. Phillips, Engr. (Lately noted.)

N. C., Washington.—Will construct 65,000 sq. yds. vitrified brick with asphalt filler paving; 2.6 mi. storm sewers; \$121,176; P. G. Ligon, Contr., 2000 Brookfield Ave., Baltimore; P. A. Painter, City Engr. (Lately noted inviting bids.)

N. C., Wilkesboro.—Will construct and improve roads; vote on \$130,000 bonds. Address Wilkes County Commrs.

Okla., Altus.—Will construct 1 mi. road in Jackson County; bids until Feb. 1; Robert C. Terrell, State Highway Engr., Oklahoma City.

Okla., Claremore.—Will resurface streets. Address The Mayor.

Okla., Durant.—Will construct 80 mi. road in Bryan County; bids until Feb. 1; Robert C. Terrell, State Highway Engr., Oklahoma City.

Okla., Newkirk.—Work has started on 1½ mi. brick surfaced and 1½ mi. concrete road;

plans are being made for 2 mi. road from city toward 101 Ranch. Address Kay County Commissioners.

Okla., Norman.—Plans 72 blocks paving during 1921 and several miles cement sidewalks; W. R. Gater, City Mgr.

Okla., Pawhuska.—Will construct 7 mi. road in Osage County; bids until Feb. 1; Robert C. Terrell, State Highway Engr., Oklahoma City.

Okla., Tishomingo.—Will construct 35 mi. road in Johnston County; bids until Feb. 1; Robert C. Terrell, State Highway Engr., Oklahoma City.

Okla., Walters.—Will pave 55 blocks; construct storm sewers; contract let. Address City Commrs.

Okla., Weleetka.—Will pave streets; bids until Feb. 16; V. V. Long & Co., Engrs., Oklahoma City, Okla. (See Machinery Wanted—Paving.)

S. C., Charleston.—Will surface boulevard driveway with oyster shell, clay gravel, marl-gravel, etc.; bids opened; J. H. Dingle, City Engr.

S. C., Gaffney.—Will pave streets; vote Feb. 4 on \$100,000 bonds; J. H. Turner, Mayor.

Tex., Coleman.—Will construct 6.75 mi. gravel road; 2 low-water concrete bridges; \$50,000 available; Burks, Firmin & Hart, Contrs., Comanche, Tex.; W. E. Dickerson, Engr., Coleman. (Lately noted inviting bids.)

Tenn., Jackson.—Will construct roads; vote on \$300,000 bonds. Address Madison County Commrs. (Lately noted contemplating.)

Tenn., Jackson.—Will construct concrete curb and gutter on Nelson St.; 2080 lin. ft.; \$1600 available; Yandell & Conger, Contrs.; Paul M. Wilson, Commr. Streets. (Lately noted inviting bids.)

Tenn., Tiptonville.—Have started construction of sidewalks. Address The Mayor.

Tenn., Union City.—Will pave 2½ mi. asphaltic streets. Address Mayor Pittman.

Tex., Beaumont.—Will construct highway between Nemo and Sour Lake, including 200 ft. roadway, etc.; invites bids. Address Jefferson County Commrs.

Tex., Cameron.—Will construct 8.7 mi. Highway No. 36 in Milam County; \$68,696; W. C. Gellis, County Judge; A. F. Mitchell, County Engr.

Tex., Dallas.—Will improve Miller's Ferry Road in Dallas County; bids until Feb. 3; Chas. E. Gross, County Auditor; Nagle-Witt-Rollins Engineering Co., Dist. Engrs. (See Machinery Wanted—Road Construction.)

Tex., Eastland.—Will construct roads; bituminous macadam; \$4,500,000; Fleming Slitzer Road Building Co., Contr.; W. R. Eedes, Engr. (Previously noted.)

Tex., El Paso.—Will construct pavement on 250 ft. Myrtle Ave.; bids until Feb. 24; Chas. Davis, Mayor. (See Machinery Wanted—Paving.)

Tex., El Paso.—Will construct 15.45 mi. concrete paved road on State Highway No. 33, the Alamogorda road; 163,200 sq. yds. pavement; \$479,245.81; El Paso Bitulithic Co., Contr.; L. A. White, County Engr. (Lately noted inviting bids.)

Tex., Fort Worth.—Will expend \$513,000 in paving 18 streets, including Evans, Galveston, College, Central Aves. and other streets; D. L. Lewis, City Engr. (Lately noted.)

Tex., Groesbeck.—Will construct 23.1 mi. State Highway No. 14; \$59,400 Federal aid granted; H. F. Kirby, County Judge; Fred. P. Holt, County Engr.

Tex., Henderson.—Will construct roads on State Highways 26 and 43; bids until Feb. 24;



ness & Skinner, County Engrs., Southwestern Life Bldg., Dallas, Tex.; J. T. Watson, County Judge, Henderson. Lately noted. (See Machinery Wanted—Road Construction.)

Tex., Hondo.—Will construct 10.8 mi. gravel surfaced road on State Highway No. 2; \$200,000; J. R. Noonan, County Judge; Alex. Walton, County Engr.

Tex., Kaufman.—Will construct 125 mi. roads; will let contracts; Bartlett & Ranney, County Engrs.

Tex., Marlin.—Will construct 46 mi. gravel surfaced roads in Precinct No. 1 in Falls County; bids until Feb. 1; G. W. Courier, County Engr. Lately noted. (See Machinery Wanted—Road Construction.)

Tex., Paris.—Will pave South 22nd St. from Texas & Pacific Ry. tracks to city limits; \$42,800; J. M. Crook, Mayor; R. G. Tyler, City Engr.

Tex., Pecos.—Will construct portion of Bankhead Highway; D. E. H. Manigault, Engr., El Paso, Tex. Address Reeves County Judge.

Tex., Rockdale.—Will construct 8.8 mi. Sap highway from Rockdale to Hicks; \$48,000; O. E. Phillips, County Commr. Road Dist. No. 10; A. F. Mitchell, County Engr., Cameron, Tex.

Va., Danville.—Will pave streets; vitrified brick, durax block, sheet asphalt, asphaltic concrete, concrete bituminous macadam; \$200,000; bids about April; issue \$100,000 bonds; R. K. Linville, City Engr. (See Machinery Wanted—Paving.)

Va., East Radford.—Will improve streets; may vote on \$200,000 bonds. Address Mayor Gilbert.

Va., Farmville.—Will construct 3.37 mi. soil roads on State Road No. 10 in Prince Edward County between Bush River Bridge and Rice; Virginia Project No. 75A; bids until Feb. 8; G. P. Coleman, Commr. State Highway Comsn., 616 S. Third St., Richmond, Va. (See Machinery Wanted—Road Construction.)

Va., Harrisonburg.—Will construct 2.1 mi. bituminous macadam road on State Road No. 17 in Rockingham County between Dayton and Bridgewater; Virginia Project No. 95; bids until Feb. 8; G. P. Coleman, State Highway Commr., 116 S. Third St., Richmond, Va. (See Machinery Wanted—Road Construction.)

Va., Staunton.—Will construct 23 mi. water-bound macadam road in pastures districts of Augusta County; bids until Feb. 23. Address Augusta County Supr. (See Machinery Wanted—Road Construction.)

Va., Spotsylvania.—Will construct 5.4 mi. gravel road on State Road No. 7 in Spotsylvania and Orange counties between Chancellorsville and Wilderness Run; Virginia Project No. 92; bids until Feb. 8; C. P. Coleman, State Highway Commr., 116 S. Third St., Richmond, Va. Lately noted rejecting bids. (See Machinery Wanted—Road Construction.)

W. Va., Beckley.—Will vote Feb. 22 on \$65,000 bonds. Address The Mayor.

W. Va., Charleston.—Will grade, curb and pave streets; 35,000 sq. yds. paving; bids until Feb. 5; Ernest Bruce, City Engr. (See Machinery Wanted—Paving.)

W. Va., Grafton.—Will construct 13 mi. roads; bids until Feb. 30; Frank Bennett, Clk. of Taylor County Court. (See Machinery Wanted—Road Construction.)

W. Va., Princeton.—May resurface and tar via macadam road between Princeton and Glen Lyn. Address Mercer County Commrs.

### Sewer Construction.

D. C., Washington.—Washington Suburban Sanitary Comsn. R. B. Morse, Engr. in charge, will construct sewer lines.

Fla., Fort Pierce.—Will vote Feb. 15 on \$20,000 bonds to improve and extend sewer and water systems. Address The Mayor.

Fla., Jacksonville.—Acquired Avondale sewer and water systems. Address The Mayor.

Fla., Tampa.—Will construct concrete storm sewer on 15th St. from head of estuary to 4th Ave., and on 4th Ave. from 15th to 14th St., etc.; bids until Feb. 22; Chas. H. Brown, Mayor. Lately noted. (See Machinery Wanted—Sewers.)

Ga., Milledgeville.—Let contract to J. B. McCrary Co., Atlanta, Ga., to construct sewer system.

Ga., Vidalia.—Contemplates voting on bond issue to install sewerage system. Address The Mayor.

Md., Aberdeen.—Will construct sewer system; Norton, Bird & Whitman, Engrs., Munsey Bldg., Baltimore; J. T. Baker, Mayor, Aberdeen; will invite bids later. (Previously noted.)

Md., Annapolis.—Will construct sewage-disposal plant and intersection sewers; Robt. G. Morse, Engr., 16 W. Saratoga St., Baltimore; Elliott H. Burwell, Chrmn. Sewerage Comsn. of Annapolis; will invite bids later. (Previously noted.)

Miss., Macon.—Will construct sewer system at courthouse; bids until Feb. 7; John A. Tyson, Chancery Clk. (See Sewers.)

N. C., Washington.—Let contract to P. G. Ligon, 2000 Brookfield Ave., Baltimore, Md., to construct 2.6 mi. storm sewers with trench 6 to 10 ft. deep; P. C. Painter, City Engr. (Lately noted bids until Feb. 10.)

Okl., Norman.—Will extend and improve sewer system; let contract to furnish 11,000 ft. 15-in. and 1175 ft. 18-in. tile leading from Norman to South Canadian River; Peckham, Sutton & James, Engrs., Oklahoma City. (Lately noted.)

Okl., Walters.—Will construct storm sewers; let contract. Address The Mayor.

Okl., Wynona.—Will install sewer, sewage disposal plant and water systems; bids until Feb. 21; Green Engineering Co., Engr., Oklahoma City; Dr. Prentiss, Mayor, Wynona. (See Machinery Wanted—Sewer Construction.)

S. C., Newberry.—Issued \$20,000 bonds for sewer system. Address The Mayor.

S. C., Tigerville.—North Greenville Academy let contract to Brockman Sales Co., Greer, S. C., to install sewage-disposal and water system.

Tex., Fort Worth.—Let contract to General Construction Co. to build 400-ft. monolithic concrete storm sewer on 14th St.; cost \$38,320.55; D. L. Lewis, City Engr. (Lately noted invited bids.)

Tex., San Antonio.—Let contract to Elder Construction Co. to construct approximately 47 blocks sanitary sewers in Baylor-Theo Ave. Dist.; cost \$18,599; will construct sanitary sewers between Marine and Stieren Sts. and Grand and San Antonio Rivers; bids until Feb. 28. Address The Mayor.

W. Va., Beckley.—Will vote Feb. 22 on \$30,000 sewer extension bonds. Address The Mayor.

W. Va., Martinsburg.—Let contract to P. Flanigan & Sons, Harford Road and R. & O. R. R., Baltimore, Md., to construct 12,000 lin. ft. sanitary sewers; cost \$57,634.45; John H. Zirkle, Recorder. (Lately noted bids until Feb. 15.)

### Telephone Systems.

Fla., Apopka.—Apopka Telephone Co. will repair and improve plant; reported.

Fla., Key West.—Cuban-American Telephone & Telegraph Co., 195 Broadway, New York, let

contract to Telegraph Construction & Maintenance Co., Ltd., London, England, to lay 3 cables of about 120 mi. each from Key West to Havana; costing approximately \$2,000,000; contemplates completion of cable Feb. 1 and in operation about Feb. 15.

Fla., Miami.—South Atlantic Telephone & Telegraph Co., B. F. Shotts, Pres., 315 17th St., contemplates additional expenditure of \$300,000 for year 1921. (Previously noted to expend \$160,000 on building and equipment.)

Tenn., Haysville.—Haysville.—Home Telephone Co., Incptd. by T. W. Fishburn, C. G. Dillard, U. G. White.

Tex., Dallas.—Continental Radio Telegraph Co., capital \$100,000, incptd. by W. H. and H. E. Fields and W. J. Chilton.

### Textile Mills.

Ala., Anniston.—Sash Cord, etc.—Anniston Cordage Co. will erect plant addition previously reported; Flynt Bldg. & Construction Co., Palmer, Mass. contractors for 3-story 126x109-ft. building; brick walls, with interior of wood columns, beams and plank floors; Kenyon Plumbing & Electric Co., Anniston, will install automatic sprinkler system, plumbing, etc.; mfrs. sash cord and clothes line; increase capacity to 5000 spindles; Chas. T. Main, Engr., 24 Devonshire St., Boston, Mass.

Ala., Opelika.—Cotton Goods.—Opelika Cotton Mills, H. H. McCall, Secy., will on Feb. 8 consider \$150,000 capital increase and \$125,000 bond issue.

Ark., West Helena.—Yarns.—Helena Spinning Co. will rebuild picker department, including cotton, burned at loss of \$25,000. (See Machinery Wanted—Textile Equipment.)

Fla., St. Augustine.—Silk.—American Silk Industry Co., capital \$500,000, incptd. with Thos. De Pamphilis, Pres., New Augustine, Fla.; J. M. Eastham, V.-P., Anniston, Ala.; W. L. Blackburn, Treas., Wheeling, W. Va.; W. A. McWilliams, Secy., St. Augustine; establish silk farm and factory; equip for 10,000 lbs. silk cocoons per crop. (Noted in Nov.)

N. C., Lenoir.—Hosiery.—Hickory Hosiery Mills, Hickory, N. C., will establish branch mill; leased building; install 35 machines; mfrs. men and women's hose; yearly output about 156,000 doz. pairs.

S. C., Gaffney.—Print Cloths.—Cash Mills will reorganize with \$100,000 capital.

### Water-Works.

Ala., Bessemer.—Bonds for \$675,000 to purchase water-works were defeated; B. C. Jones, Mayor. (Lately noted to vote.)

Ark., Paragould.—Will construct 4 mi. water mains with valves and fire hydrants, power plant building, power and pumping equipment; bids until April 12; W. R. Heagler & Sons, Engr., Bertig Office Bldg., Paragould; Hiram Phillips, Const. Engr., 201 Fullerton Bldg., St. Louis, Mo. (See Machinery Wanted—Water-Works Construction.)

Fla., Jacksonville.—Acquired Avondale water and sewer system. Address The Mayor.

Fla., Pensacola.—National Water Supply Co., capital \$200,000, incptd. with J. C. Lloyd, Pres., Stuttgart, Ark.; M. J. Gray, Secy., Treas., Pensacola, Fla.

Fla., Fort Pierce.—Will vote Feb. 15 on \$20,000 bonds to improve and extend water and sewer systems. Address The Mayor. (Supercedes recent item.)

Ga., Cordele.—Will extend water mains; cost \$10,000; W. G. Webb, Engr.; J. Gordon Jones, Mayor.

Ga., Ocilla.—Issued \$25,000 bonds for water-works, light and schools. Address The Mayor.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

La., Houma.—Will vote Mch. 15 on \$180,000 bonds to construct combined water-works, filtration and electric-light plant; H. M. Bourg, Mayor.

Md., Baltimore.—Public Improvement Loan Comsn. voted to raise Loch Raven dam on Gunpowder River to height of 240 ft.; cost \$5,000,000; impound between 22,000,000,000 and 23,000,000,000 gals. water; present pondage 1,500,000,000 gals.; soon invite bids; will acquire 3000 additional acres, including Warren and Phoenix; Wm. A. Megraw, Water Engr. (Lately noted.)

Md., Baltimore.—Public Improvement Loan Comsn. voted to raise Loch Raven dam on Gunpowder River from 188 ft. to 240 ft.; cost \$5,000,000; impound between 22,000,000,000 and 23,000,000,000 gals. water; present pondage 1,500,000,000 gals.; will use about 40,000 cu. yds. concrete; will open bids about Mch. 16; will acquire 3000 additional acres, including Warren and Phoenix; Wm. A. Megraw, Water Engr. and Prest. Water Board. Lately noted. (See Machinery Wanted—Dam Construction.)

Mo., Fulton.—Will vote in April on \$75,000 bonds to enlarge and improve water and light plants. Address The Mayor. (Lately noted contemplated.)

Okla., Edmond.—Will extend water system; relay 4, 6 and 8-in. pipe; voted \$36,000 bonds; contemplates issuing bonds later for building well and machinery; John Roaten, Mayor.

Okla., Norman.—Will lay 6000 ft. water mains; W. R. Gater, City Mgr.

N. C., Pollocksville.—Issued \$35,000 water and light bonds. Address The Mayor.

S. C., Tigerville.—North Greenville Academy let contract to Brockman Sales Co., Greer, S. C., to install water and sewage-disposal systems; equip plant with air pump, daily capacity 100,000 gals. water.

Okla., Ponca City.—Lake Supreme Water Co., capital \$10,000, inceptd. by J. M. Sanders, T. W. Prentice and M. P. Long.

Okla., Wynona.—Will install water, sewer and sewage-disposal plant systems; bids until Feb. 21; Green Engineering Co., Engr., Oklahoma City; Dr. Prentiss, Mayor, Wynona. (See Machinery Wanted—Water-works Construction.)

S. C., Columbia.—Will install water-works at Hyatt Park; soon to invite bids; T. K. Legare, Engr.

S. C., Newberry.—Issued \$52,000 bonds for water-works. Address The Mayor.

S. C., Union.—Let contract to Tucker & Laxton, Charlotte, N. C., to extend water-works; lay 2400 ft. wooden and 9700 ft. cast-iron pipe, from storage basin at standpipe to filter plant at power-house, and from No. 1 pump station to storage basin; Carolina Engineering Co., Engr., Washington, D. C. (Lately noted bids until Jan. 27.)

Tex., Dallas.—Let contract to United States Cast Iron Pipe Co. for 112 tons cast-iron pipe to extend water mains. Address The Mayor.

Va., Portsmouth.—Will erect 1-story 49x20-ft. pumping station addition; Geo. P. Jervey, City Mgr.; M. L. Parker, Archt., Municipal Bldg. (Lately noted.)

### Woodworking Plants.

Ark., Texarkana.—Boxes.—Texarkana Veneer Co., L. M. Moore, Gen. Mgr., will enlarge plant to mfr. boxes, crates, etc.

Fla., Fort Pierce.—Sash, Doors, etc.—Pine-ada Lumber Co., capital \$300,000, inceptd. with Cecil Ford, Prest.; F. L. Hemmings, Secy.-Treas.

Md., Easton.—Wheelbarrows, etc.—Atlas Wheelbarrow & Truck Co., capital \$30,000, inceptd. by James C. Mullikin, John E. Auld, Jr., Edwin J. Biery.

N. C., Asheboro.—Chairs, etc.—C. C. Cranford will erect plant to mfr. double cane

chairs and porch rockers; install mchy. (See Machinery Wanted—Engine; Boiler; Woodworking Machinery; Bricks.)

Okla., Oklahoma City.—Store and Bank Fixtures.—C. J. Marsh Show Case & Fixture Co. purchased 2-story 80x200-ft. building, remodel and enlarge; build additional display-room, 8 drykilns and warehouse.

Okla., Pauls Valley.—Phonographs.—White Phonographs Co., capital \$25,000, inceptd. by T. R. Spangler, J. W. White, W. O. Martin.

S. C., Denmark.—Excelsior.—R. A. Easterling, Treas. Edisto Public Service Co., interested in establishing plant to mfr. excelsior from short-leaf pine and other woods. (See Machinery Wanted—Excelsior Machinery.)

S. C., Greenville.—Folding Ladders.—Peerless Folding Ladder Co. let contract to Jamison & Morris to erect 1-story 60x200-ft. building; concrete floors and walls; daylight type; steel sash for windows; mfr. step, straight and extension ladders; J. E. Sirrine & Co., Archts.-Engrs.

Tex., San Antonio.—Furniture.—Household Furniture Co. increased capital from \$300,000 to \$500,000.

W. Va., Fairmont.—Furniture.—Fairmont Home Furniture Co., capital \$250,000, inceptd. by O. H. Himelich, Della S. Brown, both Fairmont; Robt. Himelich, Fort Wayne, Ind.

### Fire Damage.

Ala., Frostproof.—Arthur Dodd's residence. Ala., Marion.—King Hotel, containing number of stores and offices, owned by Mrs. De Witt King; loss \$80,000.

Ala., Newton.—Mullin Gin Co.'s cotton warehouse.

Ark., Grady.—E. L. Paul's building, occupied by Dr. J. W. Colquit; loss \$5000.

Ark., Sulphur Rock.—J. N. Wood's and S. H. Parks' stores; loss \$6000.

Ark., West Helena.—Helena Spinning Co.'s pickery department; loss, including cotton, \$25,000.

Ga., Augusta.—A. S. Bourne's residence; loss \$20,000.

Ga., Dalton.—H. P. McArthur's store at McCutchen; loss \$17,000.

Ga., Sandersville.—Masonic Building; loss \$20,000; B. J. Tarbutton's 3 buildings; J. B. Wall's store; total loss \$50,000.

Ky., Dixon.—Mark Hall's store; loss \$11,000.

Ky., Mayfield.—City Furniture & Repair Store; loss \$5000.

La., Opelousas.—J. J. Mistrot's residence.

La., Venice.—Store and residence owned by McKnight & Cornet, New Orleans.

Md., Berlin.—Adkins Co.'s building material plant.

Md., Easton.—Easton Milling Co.'s plant; loss \$60,000.

Mo., Kirksville.—American School of Osteopathy, Dr. A. T. Still, interested.

Mo., St. Louis.—Missouri Pacific R. R.'s shops; loss \$150,000.

N. C., Kinston.—Adler Bros. and H. Stadlem's stores; loss \$100,000.

N. C., Mount Airy.—J. C. Hollingsworth's residence, occupied by John Golins.

Okla., Clayton.—Sledge Lumber Co.'s plant.

Okla., Elk City.—R. O. Ward's building; Modern Cafe; City Barber Shop; Main Cafe; Burke Tailor Shop, and Chas. Pritch's vulcanizing and tire shop.

Okla., Frederick.—Williams & Miller's cotton ginnery; loss \$30,000.

Okla., Hartshorne.—Presbyterian church (address the Pastor), Adams' store and other buildings.

Okla., Hartshorne.—Adams Mercantile Co.'s building; Presbyterian Church, loss \$40,000. Address the Pastor.

S. C., Carlisle.—Carlisle Cotton Oil Co.'s plant.

S. C., Chester.—Samuel Robinson's store.

S. C., Simpsonville.—Sullivan-Nash Grocery Co.'s store; loss \$20,000; B. W. Burdett Bros' building; loss \$50,000.

S. C., Timmonsville.—Fayette Hill's residence.

Tenn., Memphis.—Building occupied by George Candle & Co., Stewart-Gwynne Co. and Buckingham, Andrews & Co.; loss \$50,000.

Tex., Brownwood.—R. B. Rogers Dry Goods Co.'s building and contents; loss \$155,000; Moore Construction Co. and Brownwood Electric Co.'s building and contents; \$25,000; Coggin National Bank, \$5000; Dixie Theater, building and contents, \$30,000.

Tex., Burkburnett.—C. F. Noble Oil & Gas Co.'s casing-head gasoline plant; loss \$15,000.

Tex., Brazoria.—Capt. J. C. McNeil's residence.

Tex., Conroe.—T. O. Cary's business building; loss \$40,000.

Tex., De Kalb.—Arnold & Burns' hardware and grocery store; Jones, Lawrence & Whaley's produce building; C. C. Crump's building.

Tex., Elbert.—Cleburne-Fort Worth Interurban Ry. Co.'s station.

Tex., Grandview.—Commercial Hotel, owned by J. P. Harrell; loss \$10,000.

Tex., Hondo.—Yantis Motor Co.'s garage, owned by F. C. Cockrell; loss \$8000.

Tex., Lampasas.—B. F. Rountree's residence; loss \$25,000.

Tex., Maxwell.—Martindale Seed Farms' 2 warehouses.

Tex., Mexia.—Mrs. Mattie Smith's store.

Tex., McKinney.—McKinney Mattress Factory; lost \$1000.

Tex., Rochester.—Farmers' Gin, loss \$10,000, owned by Huntsman & Harrow.

Tex., Sulphur Springs.—B. W. Nelson's warehouse.

Tex., Waco.—D. C. Hill's garage.

Va., Boonsboro (R. D. from Lynchburg).—School building. Address School Board.

Va., Charlottesville.—Mrs. H. B. Tatum's residence; loss \$15,000.

Va., Church View.—Geo. E. Northam's and J. W. Ennis' barns.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### Apartment-Houses.

Fla., Miami Beach.—L. Shophiro and L. Zack will erect 90-room apartment house at 2nd St. and Ocean Drive; 3 stories; court plan.

Fla., Palmetto.—E. W. Stoltz will erect \$25,000 apartment-house; 24 suites; reinforced

concrete; 64.6x80 ft.; 3 stories; flat tile roof; edge-grain pine floors; hot-water heat, \$3000; electric lights; plans and construction by owner. (Lately noted.)

Ga., Atlanta.—Bankers' Investment Co. will erect \$75,000 apartment house at 438 North

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Boulevard; 3 stories and basement; 18 suites; G. Lloyd Preacher & Co., Archts.

Ky., Louisville.—Frank Fehr is reported to erect 10-story apartment-house at 3d and Magnolia Sts.; cost \$800,000; 200 suites; Brinton B. Davis, Archt., Starks Bldg.

Md., Baltimore.—Herbert C. Forrester, 20 E. Lexington St., will erect \$17,000 apartment-house on Dukeland St. near Windsor Ave.; concrete and brick; irregular dimensions, 36x90 ft.; composition roof; hardwood and concrete floors; plaster board; interior tile; metal doors; wire glass; Stanislaus Russell, Archt., 11 E. Lexington St.; day work.

Mo., St. Louis.—Home and Housing Assn., Nelson Cunliffe, Chrmn. Chamber of Commerce Bldg., will erect \$75,000 apartment-house on Columbia Ave., near Macklin; 2 stories; 34x54 ft.; brick; L. Milberger, Archt.; construction by owner.

Okla., Muskogee.—L. E. Zarensen, Tulsa, will expend \$25,000 to remodel apartment-house, D St. and Broadway.

Okla., Oklahoma City.—F. A. Gross is erecting apartment-house on West 16th St., near North Robinson Ave.; construction begun.

Okla., Oklahoma City.—C. E. Hoffman will erect \$15,000 apartment house at 135-37 W. 17th St.; also 2 dwellings, 1112 and 1118 S. Reno St.; cost \$7000.

Okla., Oklahoma City.—J. H. Herndon will erect \$12,000 apartment house at 136-38 E. 12th St.

Tex., Dallas.—E. E. Alcott will erect \$5000 apartment-house at 4650 Cole St.; 10 rooms; frame; 2 suites.

Tex., Dallas.—John W. Richardson will erect frame apartment-house at 3819 Gilbert St.; 10 rooms; 2 apartments; cost \$7000.

Tex., Dallas.—R. J. Wilson will erect \$7500 apartment-house at 822-5 N. Marsalis St.; 2 stories; frame; 4 apartments.

Tex., Dallas.—Hortense Farmer will erect 2-story frame apartment-house at 897-9 Gaston St.; 4 suites; cost \$16,000.

Tex., Dallas.—J. J. Pierson will erect \$8500 frame apartment-house at 115 S. Cisco St.; 16 rooms; 4 suites.

W. Va., Fairmont.—Sam. R. Nuzum will erect \$27,000 apartment-house on Gaston Ave., between 2d and 3d Sts.; 3 stories; brick; 60x75 ft.

### Association and Fraternal.

Ga., Sandersville.—Ancient Free and Accepted Masons will rebuild structure noted burned at loss of \$20,000.

Mo., Kirksville.—Masonic Temple Assn., W. J. Bray, Chrmn. Bldg. Comm., will erect \$100,000 temple, 315 E. Harrison St.; 3 stories; 108x108 ft.; brick and stone; fireproof; Geo. P. Behrensmerer, Archt., 430 1/2 Main St., Quincy, Ill.

Mo., Springfield.—Abou Ben Adhem Shrine will erect \$300,000 mosque at St. Louis and Kimbrough Sts.; 140x267 ft.; fireproof; structural steel, concrete, brick, stone and terra-cotta; seat 6000; Moorish style; Heckenlively & Mark, Archts. (Previously noted.)

Okla., Fairfax.—Ancient Free and Accepted Masons will erect \$35,000 temple; theater on first floor.

Okla., Henryetta.—Elks' Lodge will erect 2-story brick building.

Okla., Sapulpa.—Elks' Lodge plans to erect \$100,000 building at Lee and Poplar Sts.

### Bank and Office.

Fla., Daytona Beach.—East Coast Bank & Trust Co., Fred. N. Conrad, Pres., H. E.

Pence, V.-P., will erect 2-story building on Main St.

La., Monroe.—Central Savings Bank & Trust Co., Travis Oliver, V.-P., will erect building latter part year; cost \$75,000 to \$150,000; 60x120 ft.; fireproof; stone or brick; metal ceilings; hardwood and concrete floors; ornamental terra-cotta; interior tile; metal doors; vaults; wire glass; mail chutes; vault lights; ventilators; steel sash and trim; architect not selected.

Tenn., Maryville.—First Natl. Bank will erect \$100,000 bank and office building; 60x100 ft.; 5 stories; frame and brick; steam heat; metal ceilings; hardwood floors; interior tile; metal doors; vaults; rolling partitions; wire glass; vault lights; ventilators; steel sash and trim; R. F. Graf & Sons, Archts., Knoxville; plans ready about Mch. 1. Address E. F. Ames.

Va., Bristol.—First National Bank, E. W. King, C. L. Kidd and F. C. Newman, Comm., will expend \$60,000 to \$75,000 to improve building; install furnishings, vaults, safety deposit boxes, etc.

### Churches.

Ala., Birmingham.—Ruhama Baptist Church will erect building at Underwood Ave. and 79th St., East Lake. Address The Pastor.

Ala., Opelika.—First Baptist Church will expend \$35,000 to \$40,000 to remodel building. Address The Pastor.

Ark., Little Rock.—Third Street Christian Church, Rev. H. W. Wallace, Pastor, will erect \$22,000 building at Third and Cross Sts.

Fla., Live Oak.—Methodist Church will erect \$50,000 building. Address The Pastor.

Fla., St. Petersburg.—English Lutheran Church, Rev. Dr. W. E. Pugh, Pastor; O. R. Albright, Chrm. Bldg. Comm., will erect \$50,000 building at 5th St. and 4th Ave., site 100x100 ft.

Ga., Onitman.—Presbyterian Church will erect \$5000 addition to building. Address The Pastor.

Ky., Dalton.—Amburgy Coal Co. will build church. (See Dwellings.)

Kv., Lennet.—Number Four Coal Co. will construct church and school.

Md., Brunswick.—Grace Chapel of St. Mark's charge, Protestant Episcopal Church, Rev. E. E. Burgess, Rector, will erect \$50,000 building; brick; slate roof; fireproof.

Md., Catonsville.—St. Mark's Church will make alterations and extensions to building; stone main entrance, vestibule and side entrances; confessionals and extensions to choir loft; slate roof; tile and concrete floors; interior tile; Geo. R. Callis Jr., Archt., 611 American Bldg., Baltimore.

Mo., Bolivar.—Christian Church, Rev. P. A. Smith, Pastor, plans to erect \$40,000 building.

Tex., Dallas.—First Baptist Church will erect \$600,000 church and Sunday-school building; 128x236 ft.; church proper to have 3 galleries, and Sunday-school portion to be 7 stories; fireproof; steel and hollow tile; tile and composition roof; steel, hardwood and concrete floors; plaster boards; ornamental terra-cotta; interior tile; metal doors; rolling partitions; wire glass; vault lights; ventilators; safes; Otis elevators or equal; contract awarded probably in Feb. Address R. H. Hunt Co., Archt., 121 S. Southwest Life Bldg. (Lately noted.)

Mo., St. Louis.—United Hebrew Congregation, Dr. Samuel Thurman, Rabbi; Joseph Van Raalte, Chrmn. Comm.; is reported to erect \$300,000 building on Delmar Ave.; 125x150 ft.

N. C., Washington.—Disciples of Christ will erect brick church; cost \$50,000 to \$100,000. Address The Pastor.

Okla., Oklahoma City.—Trinity Church will erect \$45,000 Sunday-school addition; 3 stories and basement; brick, stone trim; composition roof; Hawk & Parr, Archts., Security Bldg.

Okla., Tulsa.—Trinity Episcopal Church, Rev. R. P. Crum, Rector, plans to erect building.

Tex., Cuero.—Baptist Church plans to erect \$30,000 building. Address The Pastor.

Tex., Edinburg.—First Baptist Church will erect \$30,000 building; 49x22 ft.; brick; concrete and hardwood floors; rolling partitions; John McKenney, Archt.; Ben. M. Eldson, Supt. of Construction. (Lately noted.)

Tex., Gainesville.—Dixon Street Christian Church plans to erect building. Address The Pastor.

Tex., Oak Cliff, Sta. Dallas.—Oak Cliff Presbyterian Church will erect \$100,000 building; brick, stone trim; Herbert M. Greene Co., Archt., North Texas Bldg., Dallas.

Va., Farnham.—Episcopal Church, F. Northrup, Chrm. Bldg. Comm., will expend \$20,000 to remodel building; 1 story; brick; B. J. Rowlett, Archt., Old Dominion Trust Bldg., Richmond.

Va., Lawrenceville.—Methodist Church, W. A. Trotter, Chrm. Bldg. Comm., will erect 2-story Sunday-school building; brick and frame; plans by owner.

Va., Martinsville.—Broad St. Baptist Church, Rev. J. P. McCabe, Pastor, will erect \$40,000 church and Sunday-school building; C. B. Kearfott, Archt., Bristol, Tenn.

Va., Newport News.—Hebrew Congregation is reported to erect \$33,000 building; 1 story and basement; 42x90 ft.; brick; B. B. Spigal, Archt., 112 E. Main St., Norfolk.

Va., Norfolk.—J. W. Legum, 1218 Liberty St., is interested in erection of synagogue at Liberty and Brunswick Sts., Berkley; cost \$35,000; 2 stories; 39x78 ft.; brick; B. B. Spigal, Archt., 112 E. Main St.

Va., Petersburg.—Monumental Baptist Church will erect \$40,000 building on Halifax St. Address The Pastor.

Va., Portsmouth.—Westhaven Baptist Church, Rev. W. G. Davis, Pastor, will erect \$30,000 building; 2 stories; 68x75 ft.; brick; Herbert L. Cain, 12 N. 9th St., Richmond.

Va., Salem.—College Lutheran Church, Professor Carpenter, Chrmn. Building Comm. Roanoke College, will erect \$60,000 building, College Ave. between Burwell St. and Pennsylvania Ave. (Lately noted.)

W. Va., Huntington.—St. Paul's Lutheran Church will erect \$80,000 building; 2 stories and basement; 45x100 ft.; brick and stone; Wm. F. Dreht, Archt., R. P. Bldg.

W. Va., Wheeling.—St. Paul's Evangelical Church, Rev. August C. Rasche, Pastor, is not ready to erect proposed building; date of construction indefinite. (Lately noted.)

### City and County.

Md., Baltimore.—Comfort Station.—Board of Awards, Wm. F. Broening, Pres., will receive bids in duplicate at office of Richard Gwinn, City Register, until Mch. 2 to erect comfort station at Cross Street Market; drawings and specifications at office of J. Frank Crowther, Inspector of Buildings, City Hall. (Previously noted.)

Md., Baltimore.—Engine-house.—Will erect engine-house at Liberty Heights and Packard Aves.; Charles Herbold & Sons, 2768 W. North Ave., lowest bidders at \$25,300. Address Board of Awards, Wm. F. Broening, Pres., City Hall. (Lately noted.)

Miss., Crystal Springs.—Will repair jail. Address The Mayor.

Miss., Hattiesburg.—City Hall, Schools, etc.—Mayor T. E. Batson and Board of Comms.

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will receive bids until Mch. 17 on \$365,000 bonds, including \$100,000 to erect city hall; \$169,000 for white school on Main St.; \$75,000 for colored school in Ward Four; \$6000 for repairs to existing schools; \$15,000 for purchase of fire department equipment and apparatus. (Previously noted.)

Tenn., Knoxville.—Will erect juvenile detention home; cost \$25,000 to \$33,000; address Juvenile Judge E. G. Stooksbury.

Tex., Dallas.—Nurses' Home.—City and County, Frank W. Wozencraft, Mayor; Arch. C. Allen, County Judge, will erect \$130,000 nurses' home; stone, brick and terra-cotta; gravel roof; Herbert M. Greene Co., Archt., North Texas Bldg.

### Courthouses.

Tex., Austin.—Travis County, Fred. C. Malone, County Clk., purchased property W. 9th St., between Lavaca and Colorado Sts., and plans to erect courthouse.

Fla., Panama City.—Bay County Commrs. will receive bids until Mch. 7 to erect courthouse and jail; 70x170 ft.; brick, steel, lumber and tile; tile roof; concrete and wood floors; steam heat; city lights; S. J. Welch, Archt., Pensacola. (Lately noted.)

N. C., Burlington.—Alamance County Commissioners will remodel courthouse; brick; stone trim; composition roof; cost \$200,000, special tax authorized by Legislature. Address B. M. Rogers, Registrar.

### Dwellings.

Ala., Montgomery.—Mrs. J. A. Young will expend \$5580 to remodel and erect 2-room addition to building at 415 S. Lawrence St.

Ala., Tuscaloosa.—D. O. Parker will erect \$30,000 residence; 10 rooms; brick and tile; tile roof; hardwood floors; steam heat; interior tile; D. O. Whildin, Archt., Title Guaranty Bldg., Birmingham; day labor.

Ark., Fordyce.—Bob Bethea will erect 2-story brick residence.

Ark., Heber Springs.—J. L. Randolph will erect residence.

Fla., Daytona.—William Elert purchased property and plans to erect residence.

Fla., Daytona Beach.—E. E. Burleigh purchased property on S. Atlantic Ave.; plans to erect residence and develop remainder.

Fla., Jacksonville.—M. H. Haughton is erecting 7-room residence at Avondale Ave. and Oak St.; Avondale; construction begun.

Fla., Leesburg.—R. L. Collins purchased uncompleted Van Sant residence on Main and Lee Sts. and will complete construction.

Fla., Tampa.—H. B. Seldomridge will erect \$500 residence at 2815 Nebraska Ave.

Fla., Tampa.—Guana Cueto will erect \$7000 frame residence at 2502 Tallaferra St.

Fla., Tampa.—T. G. Clayton will erect \$7000 frame residence at 715 Worth Ave.

Ga., Canton.—Paul Jones will erect \$20,000 residence; tile roof; hardwood floors; hot-water heat; metal ceilings; plaster board; E. C. Seez, Archt., 306 Healy Bldg.; day work.

Ga., Macon.—J. R. Williams will erect \$15,000 residence; brick veneer, stone trim; tile roof; tile and hardwood floors; steam heat; Curran R. Ellis, Archt.

Ga., Macon.—Dr. O. M. Marshall plans to erect residence on North Ave., North Highlands.

Ky., Danna.—Amburgy Coal Co. will build 10 miners' houses, church and coal tippie; contract at once.

Ky., Pikeville.—Elkhorn Creek Coal Co. will construct 12 miners' houses; contract at once.

Ky., Pikeville.—Christie-Sowards Mining Co. will erect 20 dwellings, boarding-houses, etc.; frame; composition roof; oak or pine floors; hollow fireproof tile; plaster board; ornamental terra-cotta; interior tile; wire glass. Address E. H. Sowards, V.-P.

Ky., Whitesburg.—Big Four Coal Co. will construct 12 miners' houses at Sandlick.

La., New Orleans.—M. Sazer will erect 3 bungalows on South Roman and General Pershing Sts.; cost \$15,000.

La., New Orleans.—Frank A. Bordes will erect \$6900 double cottage on St. Ann and Alexander Sts.; S. P. Simone, Archt.; construction by owner.

La., New Orleans.—Jas. R. Givens will erect \$5000 bungalow at S. Claiborne and Robert Sts.; construction by owner.

Md., Baltimore.—Fairmont Land Corp. will erect 2-story frame dwelling on Gwynn's Falls Park, near Poplar Rd.; cost \$6000.

Md., Baltimore.—Philip S. Morgan, 12 E. Lexington St., will erect three 2-story frame dwellings, Norfolk and Walcott Aves., Forest Park; cost \$24,000; 24x31.5 ft.; slate roofs; Geo. Wessel, Archt., 2752 Winchester St.; construction by owner. (Lately noted.)

Md., Baltimore.—Northern Engineering Co., 1134 W. 36th St., will erect 42 dwellings on 33rd St., near Cedar Ave.; cost \$200,000; 14x45x25 ft.; brick and concrete; Ruberoid roofing; pine and oak floors; hollow fireproof tile; steam heat; electric lighting; Frederick E. Beall, Archt., 1325 Gilmer St.; construction by owner, who may be addressed.

Md., Baltimore.—E. J. Gallagher Realty Co., Munsey Bldg., will erect ten 2-story brick dwellings at 3300-18 Westward Ave.; cost \$30,000; also five 2-story dwellings at 717-25 E. 34th St.; cost \$16,000.

Md., Brunswick.—W. S. Shannon will erect residence on Petersville State road.

Mo., Clayton.—G. P. Wuest, Wainwright Bldg., St. Louis, is preparing plans for alterations and additions to frame residence.

Mo., Clayton.—L. Lazerine will erect addition to residence; cost \$3500; frame; asphalt slate roof; hardwood floors; heating already installed; bids opened in about 10 days; Gustav P. Wuest, Archt., 922 Wainwright Bldg., St. Louis. (Lately noted.)

Mo., Kirkwood.—A. L. Kiel, 3218 Park Ave., will erect \$15,000 residence, Manchester and Barry Rds.; 1½ stories; 28x42 ft.; hollow tile and stucco; plans by owner.

Mo., Kansas City.—A. W. Garrett, 2547 Agnes Ave., will erect \$8000 residence at 2504 E. 49th St.; 1 story and basement; 24x40 ft.; frame; shingle roof; plans and construction by owner.

Mo., St. Charles.—Theo. Pundmann, Main and Adams Sts., will erect \$6000 residence; 2 stories; 30x40 ft.; frame and stucco; plans by owner.

Mo., St. Louis.—Nolte & Nauman, Fullerton Bldg., are preparing plans for 2 dwellings on Columbia and 50th Sts.; cost \$7000; 1 story; 24x34 ft.; frame and stucco.

Mo., St. Louis.—O. J. Bopp, Odd Fellows Bldg., is preparing plans for \$12,000 residence, Kingshighway, S. E.; 2 stories; 43x30 ft.; brick.

Mo., St. Louis.—F. C. Brewer, 5510 Cages Ave., will erect \$12,000 residence, Arundel Pl., Hillcrest; 2½ stories; 30x33 ft.; brick; Wm. P. McMahon, Archt., Title Guaranty Bldg.

Mo., Webster Groves Sta., St. Louis.—H. D. McCorkle will erect \$6000 frame bungalow; 24x41 ft.; asphalt slate roof; yellow pine floors; plaster board; hot water or furnace heat; electric lighting; bids opened in about 10 days; Gustav P. Wuest, Archt., 922 Wainwright Bldg.

N. C., Asheville.—J. D. Dermitt will erect \$6500 residence on Haywood St.

N. C., Charlotte.—Morehead Street Homes Co., 111-15 Kinney Bldg., ineptd. with \$100,000 capital stock; W. D. Wilkinson, B. Rush Lee and others, incorporators.

N. C., Charlotte.—H. C. Sherrill Co., H. C. Sherrill, Prest.; W. H. Bethea, V.-P., organized with capital stock of \$206,000; will erect number of dwellings; cost \$3000 to \$7000 each; frame; shingle roofs; hot air heat; hardwood floors; construction by owner.

N. C., Greensboro.—Revolution Mill Co. will erect 2 dwellings as parsonages for Baptist and St. Paul's M. E. churches.

N. C., Winston-Salem.—Dr. J. E. Carsons will erect residence at Buena Vista; 50x50 ft.; Fiske-Lock brick; 10 rooms; tile roof; hardwood floors; tile on verandas; hot water heat; C. Gilbert Humphreys, Archt.

N. C., Winston-Salem.—Dr. J. C. Wiggins will erect frame dwelling, West End Blvd.; cost \$12,000; C. Gilbert Humphreys, Archt.

N. C., Winston-Salem.—C. E. Hopkins will erect bungalow on Boulevard; hollow tile; asbestos-shingle roof; cost \$8000; C. Gilbert Humphreys, Archt.

Okla., Muskogee.—H. O. Valeur, B. H. Daugherty and F. R. Hill, organized company to erect residences.

Okla., Oklahoma City.—R. H. Stoddard will erect \$10,000 stucco residence at 215 W. 25th St.

Okla., Oklahoma City.—W. L. Burk will erect \$8000 residence at 390 W. 23d St.

Okla., Oklahoma City.—W. W. Batchelor will erect \$5000 residence at 1509 W. 44th St.

Okla., Oklahoma City.—C. E. Hoffman will erect 2 dwellings at 1122 and 1118 S. Reno St.; cost \$7000. (See Apartment Houses.)

Okla., Oklahoma City.—J. Holmboe will erect \$10,000 brick and tile dwelling at 316 N. McKinley Ave.

Okla., Oklahoma City.—W. Olvest will erect \$5000 residence at 1813 W. 15th St.

Okla., Oklahoma City.—E. C. Ross will erect \$7000 residence at 233 E. 16th St.

Okla., Perry.—Ewing & Dyer will erect two 5-room bungalows; cost \$5000.

Okla., Perry.—Pollard & Mozingo will erect three 5-room bungalows; cost \$10,000.

Okla., Perry.—Guy Sailing will erect \$2000 cottage and is remodeling residence.

Okla., Perry.—L. P. Stump contemplates erecting residence and garage; 6 rooms; tile, stone and stucco; hot water heat.

Okla., Perry.—Harry McCoy will erect 1 or 2 bungalows in Porter Addition; 6 or 7 rooms.

Tex., Dallas.—W. L. Kelly will erect \$2000 residence at 1323 Grigsby St.; 8 rooms; 2 stories; frame.

Tex., Dallas.—J. B. Martin will erect three 5-room frame cottages; total cost \$8630.

Tex., Dallas.—E. L. Sterman will erect 6-room brick cottage at 615 N. Clifton St.; cost \$7000.

Tex., Dallas.—R. E. Wylie will erect 2-story brick-veneer residence at 1429 Garrett St.; cost \$12,000.

Tex., Dallas.—Builders' Investment Co. will erect two 6-room frame cottages at 2921 and 2925 Palm St.; cost \$8000.

Tex., Dallas.—M. E. McKay will erect 8-room addition to residence, 623-25 Comal St.; cost \$5000.

Tex., Dallas.—Ivy M. McAnnally will erect 12-room residence at 3741 Cole St.; 2 stories; cost \$8000.

Tex., Dallas.—A. Margules will erect 8-room brick-veneer residence at 3007 Peabody St.; cost \$8500.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tex., Dallas.—H. S. Crabtree will erect 5-room frame cottage at 2522 Park Row; cost \$500.

Tex., Dallas.—Mrs. J. W. Williamson will erect 7-room brick-veneer cottage at 5726 Richmond St.; cost \$7900.

Tex., Dallas.—K. A. Heiskell will erect 2 5-room frame cottages at 2530 and 2542 W. Brooklyn St.; cost \$5000.

Tex., Dallas.—M. F. Shelby will erect two 6-room frame cottages at 726 and 730 Elsiebeth St.; cost \$8000.

Tex., Port Arthur.—Texas Co. will erect 21 cottages for employees; average cost \$1400 each; 86 dwellings recently completed.

Tex., Fort Worth.—W. J. Meggs will erect 2 six-room frame dwellings at 2712 May St. and 314 Jefferson St.; cost \$7250.

Tex., Fort Worth.—J. E. Neel will erect 3 five-room frame dwellings; cost \$9750.

Tex., Fort Worth.—C. B. Sammon will erect 3-room frame dwelling at 3208 Travis St.; cost \$6500.

Tex., San Antonio.—Mrs. J. W. Wells will erect \$5000 6-room residence on Cincinnati Ave.

Tex., San Antonio.—D. Ansley will erect two 4-room dwellings on Huisache Ave.; cost \$5200.

Tex., San Antonio.—P. J. Neal will erect \$600 6-room residence on Dewey Pl.

Va., Annherst.—Peyton R. Evans will erect \$500 residence; 1½ stories; 32x32 ft.; slate and asphalt shingle roof; oak and yellow pine floors; hot-water heat; farm lighting plant; Philip N. Stern, Archt., Law Bldg., Fredericksburg. (Lately noted.)

Va., East Radford.—J. H. Epperly will erect 5 dwellings; cost \$15,000; 6 and 8 rooms; frame; pine floors; hollow fireproof tile; plaster board. (See Machinery Wanted—Lumber.)

Va., East Radford.—Thos. J. Wallner will erect residence on 11th St., Crowell addition.

Va., Richmond.—Davis Bros., Inc., will erect 8 dwellings; cost \$56,000; 21x26 ft.; brick; slate and slag roof; oak floors; hot-water heat; electric lights; L. Otis Spiers, Archt., 2510 W. Main St.; construction by owner.

W. Va., Charleston.—Atlantic Coal & Iron Co. took over leases of Maryland New River Co., including tracts of about 3500 acres; plans to open mines and establish town, erecting about 50 dwellings.

## Government and State.

Ala., Speigner—Prison.—State, C. B. Rogers, Warden-General, Capitol, Montgomery, will erect \$500,000 prison and manufacturing plant, lately noted; about 600x40 ft.; 3 stories; reinforced concrete; fireproof; fireproof roof; reinforced concrete floors; stairways; wire glass; ventilators; Martin J. Lide, Archt., Birmingham; construction by force account. (See Machinery Wanted—Reinforcing Bars; Cement; Sand and Gravel.)

Md., Baltimore—Memorial.—State Memorial Comn., Comptroller E. Brooke Lee, Chrmn., Annapolis, and City Memorial Comn., Harry C. Jones, Chrmn., Chamber of Commerce Bldg., Baltimore, will erect soldiers' memorial building on square between Lexington, Gay, Fayette Sts. and Falkway; cost \$1,000,000; will have specifications ready in about 2 weeks and invite competitive plans. (Previously noted.)

## Hospitals, Sanitariums, Etc.

Ky., Owenton.—County Commrs. are considering erecting county hospital.

Mo., Kansas City.—Physicians and Surgeons' Hospital Co., Drs. H. S. Lane, J. F. Mackey and others, Board of Directors; plans to erect hospital; capital \$50,000.

Tex., Austin.—Legislature passed a bill for appropriation of \$300,000 to erect and equip tuberculosis hospital for negroes; location not decided. Address State Health Commr.

## Hotels.

Ark., Garden.—Hope Brick Works, Hope, Ark., will erect \$16,000 hotel; brick; tin roof; concrete, tile and wood floors; gas heat; city lights; Witt, Seibert & Halsey, Archts., Texarkana, Ark.; construction by owner.

Fla., Fort Meade.—Hannan Head and L. L. Bean will erect hotel 42x105 ft., 3 stories, and 4 stores 25x80 ft., 1 or 2 stories; brick or hollow fireproof tile; metal ceilings; ornamental terra-cotta; interior tile; steel sash and trim; probably Barrett or Johns-Manville roof; wood floors; elevator; M. Leo Elliott, Archt., Tampa; construction on cost plus basis under supervision of owners. Address Mr. Bean. (Lately noted in part.)

Fla., Safety Harbor.—D. M. Pipkin, Sr., will erect hotel; 2 stories; 36x53 ft.; 24 guest-rooms; stucco; hot-air heat.

Fla., Orlando.—San Juan Hotel, Edwin P. Beeman, Mgr., will erect 7-story concrete addition; 150 rooms with private bath; cost about \$350,000; Alex. Stevens & Co., Chicago estimating.

Ky., Barbourville.—Wm. M. Jones, Russell, will alter and erect addition to Hotel Jones; Ralph Murray, Archt., Temple Bldg., Ironton, O.

La., New Orleans.—A. Burglass is reported to erect 16-story hotel at University Pl. and Common St. during year.

Md., Baltimore.—T. R. Bond, 12 E. Lexington St., representing syndicate, purchased about 450 acres on Gibson Island, on Magothy River, and will develop; plans to divide in tracts of from 1 to 10 acres; also considering erecting hotel, clubhouse, etc.

Okla., Miami.—S. E. Kenoyer, Alex. Cardin and W. L. Frazer purchased Commerce Bldg., and will expend \$30,000 to remodel for hotel.

Tex., Groesbeck.—J. H. Browder will erect 40-room hotel at Ellis and State Sts.; brick.

Tex., San Antonio.—Mrs. Esther M. Dalkowitz will remodel and erect additional story to 2-story building at 1508 Main Ave. for 90-room hotel; private baths; cost \$35,000; David S. Lown, Archt.

Va., Hot Springs.—Virginia Hot Springs Co., M. C. Ingalls, Pres., will erect \$40,000 addition to hotel; 1 story; 70x200 ft.; brick; Elmer & Anderson, Archts., Citizens Bldg., Cincinnati, Ohio.

W. Va., Bluefield.—Rotary Club is reported promoting erection of \$1,000,000 hotel, Federal and Scott Sts.; Alexander B. Mahood, Archt.

## Miscellaneous.

Ala., Avondale (P. O. Birmingham).—Avondale Mills will construct bathhouses in connection with mill quarters; cost \$5000.

Ala., Montgomery.—Clubhouse.—Montgomery Country Club will expend \$5200 to remodel building.

Ark., Fordyce—Cafe.—Evans Rogers, Kingsland, will erect cafe; 2 stories; brick veneer.

Ark., Malvern.—Clubhouse.—Woman's Club will erect clubhouse.

Ark., Hope.—Draft Building.—Hope Brick Works will erect \$6000 draft building; 24x24 ft.; brick; tin roof; construction by owner.

Fla., Miami—Market.—Jacob Engler will erect cement public market at Avenue J and 2d St.; cost \$10,000.

Fla., Miami.—Museum.—Miami Beach Bayshore Co., Carl G. Fisher, Pres., will establish zoological park and museum of natural

history at Miami Beach; estimated cost \$250,000.

Ga., Augusta.—Fair.—Georgia Carolina Amusement Co. purchased tract in 1806 block of 15th St. and will construct fair grounds, including pavilion, concession huts, exhibit stands, etc.; cost \$10,000.

Ky., Louisville.—Clubhouse.—Bardstown Road Welfare Assn. incptd. with \$25,000 capital; A. B. Gwin, T. H. Boden, H. C. Yunker, incorporators; plans to erect \$20,000 clubhouse. (Lately noted.)

Ky., Louisville.—Exhibit Building.—Kentucky State Fair Assn., 602 Republic Bldg., receives bids at office Joseph & Joseph, Archts., Francis Bldg., until Mch. 1 to erect \$300,000 merchants and manufacturers building; 60x100 ft.; 1 story; brick, concrete and steel. (Previously noted.)

Md., Annapolis.—Community Center.—First Methodist Episcopal Church, State Circle, will erect building for religious education and community center. Address The Pastor.

Tenn., Memphis.—Clubhouse.—Catholic Club Building Assn., J. J. Carrigan, Chrmn., plans to erect clubhouse; R. G. Ragan, Archt.

Tex., Dallas.—Clubhouse.—Kidd Springs Boating and Fishing Club will erect \$20,000 clubhouse.

## Railway Stations, Sheds, Etc.

Ky., Covington.—Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, will erect passenger and freight station; 2 stories and basement; cost \$100,000; J. C. Haly, Supervising Archt., Louisville.

La., Baton Rouge.—Illinois Central R. R., F. L. Thompson, Ch. Engr., Chicago, contemplates enlarging passenger station.

Mo., St. Louis.—United Railways Co., Rolla Wells, Pres., 39th St. and Park Ave., will erect \$20,000 waiting room and substation, 6100 Delmar St.; 1 story; 48x22 ft.; electric lights; M. Arhelger, Archt., care owner.

Tex., Elbert.—Cleburne-Forth Worth Interurban Ry. Co. will rebuild station noted burned.

W. Va., Ceredo.—Ceredo Independent School Dist., H. L. Stone, Wayne, will erect high school; 3 stories; 150x100 ft.; fireproof; brick; Richard M. Bates, Jr., Archt., First Natl. Bank Bldg., Huntington.

W. Va., Glen Jean.—Board of Education will erect \$250,000 high school; 2 stories and basement; brick and stone; Wyssong & Jones, Archts., Odd Fellows Bldg., Charleston and Princeton.

W. Va., Welch.—Board of Education Brown's Creek District, receives bids until Mch. 12 to erect \$125,000 grade school; 127x57 ft.; 4 stories in front, 2 stories in rear; 14 rooms; brick and stone; slate roof; maple floors; direct indirect steam heat; plans and specifications at office L. J. Hanifan, Supt. of Schools, Welch, and Alexander B. Mahood, Archt., Bluefield. (Lately noted.)

## Schools.

Ark., Hiwassee.—School Board will erect building.

Fla., Biscayne.—Dade County Board of Public Instruction, Chas. M. Fisher, Supt., Miami, called election Mch. 15 on \$10,000 bonds. (See Fla., Miami.)

Fla., Bonita Springs.—Lee County Board of Public Instruction, B. E. Tinsman, Chrmn., Fort Myers, will receive bids until Mch. 14 to erect school building in Special Tax School Dist. No. 7; plans and specifications from P. J. Kennard, Archt., Tampa, and on file at office J. D. McFerron, County Supt., Fort Myers. (Lately noted to open bids Feb. 8.)

Fla., Coconut Grove.—Dade County Board of Public Instruction, Chas. M. Fisher, Supt., Miami, called election Mch. 15 on \$30,000 bonds. (See Fla., Miami.)

Fla., Homestead.—Dade County Board of Public Instruction, Chas. M. Fisher, Supt., Miami, called election Mch. 15 to vote on \$10,000 bonds. (See Fla., Miami.)

Fla., Homestead.—Dade County Board of Public Instruction, Chas. M. Fisher, Supt., Miami, called election Mch. 15 in Homestead, Biscayne and Larkins School Dists. (Lately noted.)

Fla., Lemon City.—Dade County Board of Public Instruction, Chas. M. Fisher, Supt., Miami, called election Mch. 15 on \$60,000 bonds. (See Fla., Miami.)

Fla., Miami.—Dade County Board of Public Instruction, Chas. M. Fisher, Supt., called election Mch. 15 on bonds in following districts: Miami, \$300,000; Lemon City, \$60,000; Coconut Grove, \$30,000; Larkins, \$2,000; Biscayne, \$10,000; Perrine, \$1,000; Homestead, \$10,000. (Lately noted in part.)

Fla., Perrine.—Dade County Board of Public Instruction, Chas. M. Fisher, Supt., Miami, called election Mch. 15 on bonds. (See Fla., Miami.)

Ga., Jeffersonville.—Board of Education, W. E. Hoyle, Secy., will erect 1-story school building lately noted; 8 rooms and auditorium; hollow tile and stucco; slate or tile roof; ornamental terra-cotta; ventilators; steam heat; Hupp & Shelverton, Archts., Macon. (See Machinery Wanted—Lighting Plant; Water Equipment.)

Ga., Savannah.—City and Durham County votes May 24 on \$1,500,000 school bonds; T. M. Cunningham, Prest. Board of Education. (Lately noted.)

Ky., Hawesville.—Board of Education, Rev. T. S. McMorris, Chrmn., will erect \$12,000 grade school; 1 story and basement; brick; C. W. Kimberlin, Archt., I. O. O. F. Bldg., Owensboro.

Ky., Lennet.—Number Four Coal Co. will construct school. (See Churches.)

Ky., Paducah.—School Board will erect \$25,000 gymnasium to high school; Nevins & Wischmeyer, Archts., Starks Bldg., Louisville.

Ky., Winchester.—County Board of Education, Nathan Stevenson, Supt., will erect \$110,000 high school; 1 story and basement; 196x62 ft.; brick; stone trim; concrete floor and roof slab; John W. Crone & Son, Archts. (Previously noted.)

La., Ethel.—East Feliciana Parish School Board, D. G. Lunsford, Supt., Clinton, will erect 2 schools; one 8 rooms, brick; other 3 rooms, frame; cost \$25,000 and \$5,000, respectively.

La., Shreveport.—Caddo Parish School Board plans to erect one or more schools.

La., St. Martinville.—St. Martin Parish will receive bids at office of Nolan & Torre, Archts., 1023 Canal-Commercial Bank Bldg., New Orleans, until Mch. 10 to erect 4 brick high-school buildings; plans and specifications at office architects. (Lately noted to have voted \$400,000 bonds.)

Md., Trappe.—Board of Education, Easton, will erect \$35,000 school; 60x59 ft.; brick or tile; slate roof; wood floors; steam heat; electric lights; architect not selected; construction bids about April 1 to 10. (Previously noted.)

Miss., Belzoni.—School Board receives bids until Mch. 18 to erect \$80,000 school building; plans and specifications at office T. D. Rice, Belzoni, and R. H. Hunt, Archt., Chattanooga, Tenn.

Miss., Hattiesburg.—Mayor T. E. Batson and Board of Commissioners will receive separate bids addressed to W. E. Estes, Commr.,

Clk., until Mch. 17 to erect \$169,000 white school on Main St. and \$75,000 colored school in Ward Four; separate bids for plumbing, heating and wiring each building; R. E. Lee, Archt.; plans and specifications at office City Clerk; also bids same date for sale of bonds to erect schools; previously noted. (See City and County.)

Mo., Green Ridge.—Board of Education Consolidated Dist. No. 4, E. E. Bagby, Secy., will receive bids until April 4 to erect \$40,000 school; 2 stories and basement; 53x73 ft.; brick; stone trim; composition roof; W. F. Schrage, Archt., 43 E. 32d St., Kansas City, Mo., (Lately noted.)

Mo., Hamilton.—Board of Education, E. E. McQuillin, will erect \$70,000 high school; 2 stories and basement; 115x54 ft., with 1-story ell 41x54 ft.; brick; stone trim; composition roof; J. H. Felt & Co., Archts., 800 Grand Avenue Temple Bldg., Kansas City.

Mo., Webster Groves (P. O. St. Louis).—Webster Groves School Dist. voted \$163,000 bonds for construction work on Avery School to cost \$51,000; Bristol School, \$103,000; Shrewsbury School, \$6,000, and addition to Douglas School, \$3,000; Fred. J. Horst, Bldg. Supt. (Lately noted.)

N. C., Granite Falls.—Granite Falls Graded School Dist., Cyrus C. Babb, Secy., will erect school; election April 18 on \$70,000 bonds.

N. C., Dunn.—City will vote on \$100,000 bonds to erect school; John W. Draughan, Member School Board.

N. C., Lenoir.—City plans election on \$200,000 bonds to erect school. Address The Mayor.

N. C., Morganton.—City voted \$75,000 school improvement bonds. Address The Mayor.

N. C., Yanceyville.—Caswell County Board of Education receives bids until Mch. 7 to erect school in Locust Hill Township; cost \$17,000 to \$18,000; 1 story; 4 classrooms and auditorium; brick; asbestos shingle roof; concrete and wood floors; plaster board; ventilators; plans and specifications at office Willard C. Northrup, Archt., Winston-Salem. Address Geo. A. Anderson, Clk. School Board, Yanceyville. (Lately noted.)

Okla., Fairfax.—City is considering election on bonds to build auditorium and gymnasium to high school. Address The Mayor.

Okla., Muskogee.—Bacone College, B. D. Weeks, Prest., will erect \$100,000 administration building and girls' and boys' dormitories to cost \$60,000 each; fireproof; brick. (Previously noted.)

Tenn., Memphis.—Board of Education, G. W. Garner, Secy., will receive bids until Feb. 28 to erect additions to Lenox School and Snowden School; plans and specifications at office Jones & Furbringer, Archts.

Tex., Annona.—Annona Independent School Dist. voted \$25,000 bonds to erect brick school. Address Dist. School Trustees.

Tex., Lockhart.—Board of Education plans to erect 2-story high school to include manual training department; cost \$200,000.

Tex., San Antonio.—Sisters of Charity of Incarnate Word is reported to erect \$400,000 fireproof building.

Tex., Taylor.—City, A. V. Hyde, Mgr., will erect \$150,000 fireproof high-school building.

Va., Dunganon.—Floyd District School Board, W. H. Lundy, Chrmn., will receive bids until Mch. 19 to erect high school; plans and specifications at office W. H. Lundy, Dunganon, and H. Driot, Archt., Spurgeon Bldg., Bristol.

Va., Norfolk.—Board of Education, E. L. Myers, Chrmn. Bldg. Comm., 110 25th St., will erect junior high school on Levitt Ave., Brambleton; 3 stories and basement; brick

and limestone; Peebles & Ferguson, Archts., Law Bldg.

W. Va., Lewisburg.—Lewisburg Seminary for Girls, J. I. Armstrong, Prest., will erect dormitory to replace burned structure; Stanhope S. Johnson, Archt., Lynchburg, Va. (Lately noted.)

W. Va., Ravenswood.—Board of Education, F. O. Harpole, Prest., will erect \$60,000 high school; 2 stories and basement; 40x65 ft.; brick; stone trim; reinforced concrete flat slab floor and roof construction; R. M. Bates, Jr., Archt., First Natl. Bank Bldg., Huntington.

W. Va., Matoaka.—Board of Education, M. R. Dodd, Supt., will erect \$70,000 school; 2 stories and basement; brick; stone trim; R. M. Bates, Jr., Archt., First Natl. Bank Bldg., Huntington.

## Stores.

Ark., Harrisburg.—R. A. Ford will erect store building.

Ark., Heber Springs.—T. E. Reeves will erect two 1-story brick business buildings on Main St.; cost \$8,000; brick from Arkansas Brick Mfg. Co., Little Rock.

Fla., Fort Meade.—Hannan Head and L. L. Bean will erect 4 stores; 25x80 ft.; 1 or 2 stories; M. Leo Elliott, Archt., Tampa. (See Hotels.)

Fla., Miami.—Railey-Milam Hardware Co. will erect cement-block storeroom on Ave. F; cost \$10,000.

Ga., Macon.—H. Kaplan will erect \$20,000 store building; 2 stories and basement; 43x100 ft.; face brick and terra-cotta front; Hupp & Shelverton.

Ga., Sandersville.—B. J. Tarbutton plans to rebuild 3 structures noted burned.

Ga., Sandersville.—B. J. Tarbutton will erect store building to replace structure noted burned; 100x80 ft.; brick; metal roof; wood floors; metal ceilings; wire glass; safes.

Ky., Fort Thomas.—Wm. O. Lindsay, Fort Thomas Ave. and Millers Lane, will erect store and apartment building; 2 stories and basement; 69x25 ft.; stucco on concrete block; cost \$18,000; Randolph Ware, Archt., 410 York St., Newport.

Ky., Lexington.—Trace Fork Mining Co., C. L. Ryley, Prest., 1304 Fayette Bank, will erect commissary, coal tippie, etc., at Tesley.

Ky., Louisville.—J. P. Schneider, 1238 S. 18th St., will erect \$16,000 store and apartment building, 18th and Oak Sts.; 2 stories and basement; 25x60 ft.; brick veneer; cut-stone trim; Thos. J. Nolan, Archt., 235 Courier-Journal Bldg.

Md., Baltimore.—Geo. R. Conklin, 2608 Greenmount Ave., will erect \$6,000 building at 2602-4 Greenmount Ave.; 2 stories; brick.

Md., Baltimore.—Edwin Herman, 1655 S. Charles St., will erect \$25,000 store and apartment building; 14x60 ft.; brick and mill construction; interior tile; oak and pine floors; metal ceilings; wire glass; ventilators; steam heat; electric lights; bids opened in about 3 weeks. Address Geo. R. Callis, Jr., Archt., 611 American Bldg.

Mo., Kansas City.—O. G. Lee will remodel store and office building on Main St.; F. E. McIlvair, Archt., Orear-Leslie Bldg.

Mo., St. Louis.—R. Mederachs, 4430 Arsenal Ave., is having plans revised and will take subbids on store and flat building at 4220 Gravois Ave.; 2 stories; 36x46 ft.; brick; cost \$15,000; plans and construction by owner.

N. C., Gastonia.—Standard Hardware Co., Inc., will erect \$30,000 to \$40,000 store; 50x150 ft.; 3 stories; brick; slate surface roof; tile and wood floors; electric lights; one passenger



and one freight electric elevator. (Lately noted.)

N. C., Salisbury.—Lloyd A. Richardson will erect building on E. Main St.

N. C., Salisbury.—E. P. Wharton, Prest., Greensboro Natl. Bank, Greensboro, will construct 600 ft. cement walkway for arcade and plans to erect business buildings on each side of walk; L. S. Bradshaw, Salisbury, Contr. for walkway.

Okla., Perry.—F. E. Cooper contemplates erection of building on 6th St.; 2 or 3 stories; fireproof; brick and tile.

Okla., Perry.—J. E. Marshbanks will erect building on C St.; 25 ft. frontage.

Tex., Dallas.—A. J. Urbish will erect \$20,000 brick store on Oaklawn Ave.

Tex., Dallas.—W. J. Kain will remodel building at 2319 Main St.; cost \$10,000.

Tex., Dallas.—J. W. Sharp will erect 1-story brick building, 4111 Oak Lawn St.; 3 stories; cost \$15,000.

Tex., Cuero.—Moore & Sames will erect building and cold-storage warehouse; probably hollow tile blocks.

Tex., Mexia.—Mrs. Mattie Smith plans to erect 3-story brick store to replace burned structure.

Va., Norfolk.—United Cigar Stores Corp., 44 W. 18th St., New York, will alter and erect addition to building at 271 Granby St.; 3 stories; brick; cost \$8000.

W. Va., Elkins.—S. H. Watring will erect 3-story building; stores on first floor; second and third for apartments and lodgerooms.

W. Va., Fairmont.—Marion Ice Co. will erect \$15,000 business building at 5th St. and Virginia Ave.; 3 stories; 25x154 ft.; frame.

W. Va., Mullens.—Wysong, Tuft & Jones, Odd Fellows Bldg., Charleston, are preparing plans for store and office building; 2 and 3 stories and basement; 92x74 ft.; brick and stone.

W. Va., Wierton.—Mrs. Lucia Barone will erect store and apartment building; 3 stories and basement; 60x26 ft.; brick; M. F. Giesey, Archt., McLain Bldg., Wheeling.

## Theaters.

Ark., Newport.—R. T. Megibbon, Mgr. Capitol Theater, will remodel and erect 42-ft. extension to theater; 22-ft. stage; Typhoon fans for ventilating.

Ky., Marion.—M. V. Arnold prepared plans for theater and business building on site of old Opera House; 2 stories; 70x160 ft.; 2 stories in front, 30x70 ft., and 10-ft. hall leading to theater on ground floor; offices above.

Ky., Owensboro.—Lee Smith, 615 Plum St., will erect moving picture theater; 1 story and basement; 25x100 ft.; concrete block; C. W. Kimberlin, Archt., I. O. O. F. Bldg.

Ky., Pikeville.—N. Starkny is reported to erect \$75,000 theater; 1 story and basement; 30x70 ft.; brick, stone or terra cotta; R. M. Bates, Jr., Archt., First Natl. Bank Bldg., Huntington.

La., New Orleans.—Geo. Kaufman will erect moving picture theater on St. Charles Ave., adjoining Broadway.

Md., Annapolis.—Morris Legum will erect moving-picture theater on Washington St., near Clay St.

Miss., Gulfport.—V. A. Anderson will erect motion-picture theater.

Md., Annapolis.—J. M. L. Amusement Co., Jack Lipschln and Mary Lipschln, Norfolk, Va., will erect moving-picture theater at Northwest and Calvert Sts.; 1 story; 36x77

ft.; fireproof; hollow tile or brick; cost \$20,000.

Mo., Cape Girardeau.—Jno. T. Sackman, Chas. O. Hobbs, A. W. Blattner and others will erect \$54,000 theater.

Mo., St. Louis.—Nolte & Nauman, Fullerton Bldg., are preparing plans for \$80,000 theater, store and office building; 2 stories; 100x133 ft.; fireproof; brick; bids about Feb. 21.

N. C., Charlotte.—Charlotte Lodge B. P. O. E. No. 392, J. R. Cherry, Exalted Ruler, plan to erect home and theater combined; fireproof; theater to seat 2000 people; building and site reported to cost \$250,000.

S. C., Charleston.—Albert Sottile and associates will erect theater on George St.; C. K. Howell, Archt., Atlanta, Ga.; McCrady-Cheves Constr. Co., Contr., Charleston.

## Warehouses.

Ala., Newton.—Mullin Gin Co. will rebuild cotton warehouse noted burned.

Ga., Atlanta.—Barker Warehouse Co., Incptd. by J. U. H., M. D. and I. J. Barker; \$25,000 capital.

La., Baton Rouge.—Alfred Glassel, Shreve-

port, will erect warehouse and storage-rooms at Lafayette and Convention Sts.; 3 stories; cost \$50,000 to \$60,000; Edward Neil, Archt., Shreveport.

Mo., Joplin.—National Machinery & Supply Co., E. S. Dobbs, Supt., will erect warehouse at 5th and School Sts.; concrete foundation; day labor.

Mo., Joplin.—Joplin Commission Co., J. W. Gorsuch, Resident Mgr., will erect concrete warehouse.

Mo., Kansas City.—Liberty Bell Oil Co., Chas. Asthoff, Prest., 600 S. Vandeventer Ave., will erect \$20,000 warehouse and shed; 1 story; day labor; Henry Schaumber, Jr., Archt., 3531 Connecticut St.; Chas. Gescheidt, 1956 Alice Ave., Contr. for carpenter work.

W. Va., Huntington.—Planters' Tobacco Warehouse Co. chartered with \$50,000 capital; M. J. Ferguson, U. S. G. Pepper, Frank Agnew and others incptrs.

Tex., Dallas.—Rick Warehouse & Stores Co., Inc., A. C. Rick, Prest., will erect fireproof bonded warehouses; also sales and display building, containing convention hall and banquet-rooms; warehouse to have 300,000 sq. ft. space; Lang & Wittichell, Archts. (Previously noted.)

# BUILDING CONTRACTS AWARDED

## Apartment-Houses.

Ala., Birmingham.—G. R. Harsh will erect brick apartment-house at 30th and Juniper Sts. South; cost \$18,000; S. S. Parker, Contr.

Ark., Little Rock.—Levi Storthz will convert residence, 1103 W. Capitol St., into apartment-house; 6 suites; J. R. Casey, Contr.

Ky., Louisville.—Lincoln Apartment Co., L. Jacobson, Prest., plans to erect \$150,000 apartment-house at 1239-45 Fourth Ave.; 3 stories; brick and stone; 42 suites; site, 103x200 ft.; L. Jacobson, Contr.

N. C., Winston-Salem.—J. F. Tesh will erect apartment-house on 2d St., near Spring; 4 suites; frame, concrete foundation; 40x80 ft.; steam heat; composition roof; oak floors; cost \$30,000; Gilbert C. Humphreys, Archt.; W. H. Cleland, Contr.

Tenn., Nashville.—West End Apartment Co., Thos. S. Marr and Joe W. Holman, will erect 3-story apartment-house at Louise and Hayes Sts.; cost \$30,000; 50x50 ft.; brick; plans by owner; Sumner Construction Co., Contr. (Lately noted.)

Tex., Houston.—John L. Burton will erect 20-room apartment house; cost \$16,500; 33x60 ft.; brick veneer; slate composition roof; city lights; hardwood floors; ornamental terra cotta; plans by owner; D. B. Loy, Contr., Jackson St. (Lately noted.)

Va., Norfolk.—G. W. Stridham will erect apartment house; cost \$10,000; 2 stories; 2 suites; C. W. Beard, Contr., 121 W. 14th St.

## Association and Fraternal.

Ark., Little Rock.—Elks Lodge will remodel school building, Third and Poplar Sts., for club rooms; Whittenberg & Deloney, Archts.; J. Mahoney, Contr.

## Bank and Office.

Fla., Palmetto.—J. W. Shepperd, St. Petersburg, will erect 2-story store and office building; reinforced concrete; 40x80 ft.; plate-glass front; 3 stores on first floor; offices on second; E. W. Stoltz, Contr., Palmetto.

Ga., Atlanta.—Fulton National Bank will erect \$20,000 building; 50x110 ft.; 3 stories and basement; reinforced concrete; architect-

tural terra-cotta; marble and bronze screen; tar and gravel roof; hollow metal windows; steel sash; wiring; plumbing; vacuum heating; marble and terrazzo floors; R. R. Pringle, Archt., Empire Bldg.; Southern Ferro Concrete Co., Contrs. (Previously noted.)

W. Va., Beckley.—Raleigh County Bank will erect \$200,000 bank and office building; 40x100 ft.; 6 stories; stone and brick; built-up roof on concrete; concrete floors; elevators; safes; interior tile; metal doors; vaults; wire glass; mail chutes; vault lights; steel sash and trim; Richard M. Bates, Jr., Archt., Huntington; D. J. Phipps, Contr., Roanoke, Va. (Lately noted.)

W. Va., Gassaway.—Farmers & Merchants Bank will erect \$20,000 building; 25,10x60 ft.; brick, composition stone front; stud partitions; 2 stories and basement; composition roof; wood and tile floors; gas lights; Wysong & Jones, Archts., Odd Fellows' Bldg., Charleston; Garrett Building Co., E. L. Winshell, Mountain Lake Park, Md. (Previously noted.)

## Churches.

Md., Baltimore.—Faith Baptist Church will erect \$30,000 building at Ashland Ave. and Bond St.; 1 story; 40x75 ft.; slate roof; wood floors; metal doors; rolling partitions; John R. Forsythe, Archt., 232 St. Paul St.; J. E. Stansbury, Inc., Contr., 252 Pennsylvania Ave.

Mo., St. Louis.—Southern Mission Baptist Church, Rev. E. Jackson, Pastor, 2966 Market St., will erect \$50,000 building, Montrose and Market Sts.; 1 story and balcony; 44x80 ft.; brick; N. B. Howard, Archt., 398 Arcade Bldg.; W. Kirk, Contr., 2825 Pine St. (Previously noted.)

Okla., Ponca City.—First M. E. Church, Henry Buckner, Secy. Bldg. Comm., will erect \$90,000 building, previously noted; 72x176 ft.; brick; tile roof; hardwood floors; electric lights; hollow fireproof tile; rolling partitions; Butler & Saunders, Archts., 804 Kennedy Bldg., Tulsa; J. C. Bach, Contr., Ponca City. (See Machinery Wanted—Art Glass; Pipe Organ in Heating Plant.)

Okla., Sapulpa.—First Baptist Church will erect addition; cost \$21,490; Wm. Griffith, Archt.; T. M. Mare, Contr. (Lately noted.)

S. C., Fort Mill.—A. D. Gilchrist, Rock Hill, prepared plans for \$18,000 church; asphalt shingle roof; rift pine floors; steam heat, \$1500; hollow fireproof tile; plaster board; J. J. Bailes, Contr., Fort Mill. (Lately noted.)

Va., Roanoke.—St. Mark's Lutheran Church, H. D. Derrick, Chrmn. Bldg. Comm., will erect \$10,000 brotherhood house, Roanoke St. and Campbell Ave.; 2 stories; 22x75 ft.; brick; Barrett Specification roof; mineral rubber and concrete floors; vapor heat; electric lights; rolling partitions; wire glass; R. H. Persinger, Archt.; Tennell & Riley, Contrs. (Lately noted.)

### City and County.

Ky., Owensboro.—Stable.—Davies County Fiscal Court will erect \$500 stable, lately noted; 46x150 ft.; reinforced concrete, wood, etc.; composition roof; concrete and wood floors; C. W. Kimberlin, Archt.; Frank Gabbert, Contr., 917 Leitchfield St. (See Machinery Wanted—Building Material; Contractors' Equipment; Roofing and Siding; Ceilings; Wall Board; Wood-Working Machinery.)

Md., Baltimore.—Library.—Enoch Pratt Free Library, Mulberry St., near Cathedral, Dr. Bernard C. Steiner, Librarian, will erect \$25,000 branch library at Brooklyn; brick; tile and tin roof; composition, concrete and wood floors; vapor heat; electric lights; ornamental terra-cotta; interior tile; metal doors; E. H. Glidden, Archt., 1210 American Bldg.; Randolph B. Mason, Contr., 308 W. Madison St. (Previously noted.)

Okl., Muskogee.—Will erect grandstand on Owen Field; seat 2500 to 3000; frame; H. O. Valeur & Co., Archts.; W. L. Hoffman, Contr., at \$29,705. (Lately noted.)

Okl., Muskogee.—Will erect grandstand on Owen Field; cost \$21,000; seat 2500 to 3000; 300 ft. long; frame, concrete foundation; 3-ply prepared roofing; H. O. Valeur & Co., Archts.; W. L. Hoffman, Contr. (Lately noted.)

### Dwellings.

Fla., Bradentown.—Fred. Leschinsky will erect 1½-story residence; 24x28 ft.; frame; Reynolds asphalt roof; pine floors; T. W. Hullinger & Son, Archt.-Contr. (Lately noted.)

Fla., Tampa.—Mrs. Alice Neve will erect residence on West Michigan Ave.; interlocking tile; Spanish tile shingle roof; cost \$12,000; F. D. Parslow, Archt.; Parslow & Scott, Contrs.

Ga., Atlanta.—J. M. Phelps, 1084 Highland Ave., will erect 1-story brick-veneer dwelling; G. L. Corley, Contr.

La., New Orleans.—American Realty Investment Co. will erect \$6000 bungalow at N. Claiborne and Painters Sts.; S. P. Simone, Contr.

Md., Baltimore.—Cheswold Land Co., 215 Courtland St., will erect 3 dwellings at Pierce Ave. and Carroll Rd.; cost \$10,000; Geo. W. Fox, Contr.

Md., Baltimore.—Chas. E. Mitchell, 3113 Baker St., will erect 2½-story frame dwelling at 2911 Hawthorn Ave.; cost \$8000; 30x28.8 ft.; slate roof; steam heat; De Cou & Davis, Contrs., 5117 Wilson Ave.

Md., Baltimore.—West Forest Park Co., Inc., Liberty Heights and Clarendon Aves., will erect 4 frame bungalows at 4305-11 Springdale Ave.; 36x44 ft.; cost \$12,000; slate roofs, steam heat; Stanislaus Russell, Archt., 11 E. Lexington St.; Wm. J. French, Contr., 489 Liberty Heights Ave.

Tex., San Antonio.—Lena Rosenberg will erect 7-room bungalow on W. Mulberry St.;

cost \$8000; Colonial type; Shane & Dickey, Contrs.

Tex., San Antonio.—Sol Frank will erect 7-room bungalow on W. Mulberry St.; cost \$8000; Colonial type; Shane & Dickey, Contrs.

W. Va., Huntington.—Glogora Coal Co., First Natl. Bank Bldg., will erect numbers of miners' cottages; site unknown; 1 story and basement; 3 or 4 rooms; plans by owner; West Virginia Housing Co., Contr., Charleston.

W. Va., Wheeling.—A. M. Rice will erect \$20,000 residence; 42x44 ft.; brick; slate roof; concrete and oak floors; hollow fireproof tile; interior tile; electric lighting; E. B. Franzheim, Archt.; H. W. Fair Co., Contr.; sub-contracts let except heating.

### Hospitals, Sanitariums, Etc.

Ga., Milledgeville.—Dr. H. D. Allen will erect hospital to replace burned building; cost \$44,118; 3 stories; fireproof; hollow tile and brick veneer; 60 rooms; R. B. Wiley, Contr., Sparta.

### Hotels.

Va., East Radford.—Mrs. Dermott will erect 40-ft. extension to East End Hotel; concrete blocks; Sawyer Bros., Contr., Marion.

### Miscellaneous.

Tex., El Paso.—Clubhouse.—El Paso Country Club, Hal E. Christie, Prest., will erect clubhouse about 8 mi. from El Paso; Spanish architecture; reinforced concrete; V. E. Ware, Contr. at \$72,000. (Previously noted.)

Tex., Waco.—Clubhouse.—Spring Lake Country Club, Dr. W. R. Clifton, Chrmn., will erect \$69,000 clubhouse, 8 mi. from Waco; Italian renaissance type; 2 stories and basement; 100x88 ft.; concrete and stucco; tile roof; automatic sprinkler system; Milton W. Scott & Co., Archts.; J. E. Johnson, Contr. (Lately incorrectly noted at Tex., Spring Lake.)

Va., Richmond.—Undertaking Parlors.—L. T. Christian, 1012 E. Broad St., will erect undertaking parlors; 3 stories; brick and terra cotta; Chas. M. Robinson, Archt., Times-Dispatch Bldg.

Va., Richmond.—Bleachers.—W. B. Bradley and associates will construct baseball bleachers on Mayo's Island; cost \$12,000.

### Railway Stations, Sheds, Etc.

Okl., Hominy.—Missouri, Kansas & Texas R. R., Frank Ringer, Ch. Engr., Dallas, will erect \$20,000 depot; 1 story; 30x160 ft.; frame; A. L. Sparks, Archt., Railway Exchange Bldg., St. Louis; T. H. Johnson, Contr., Sedalia, Mo. (Previously noted.)

### Schools.

Ark., Warren.—Walters Institute, Jas. W. Eichelberger, Jr., Prest., will erect \$15,000 girls' dormitory lately noted; 42x100 ft.; concrete foundation; 1 story, brick veneer; 2 stories, frame; composition roof; pine floors; hot-water heat; electric wiring; W. A. Rayfield & Co., Archts., Birmingham, Ala.; D. R. Corrothers, Contr., Box 392, Warren. (See Machinery Wanted—Heating Plant; Lighting Plant; Well; Sewer System, etc.)

D. C., Washington.—District Commrs., 509 District Bldg., will erect 8-room addition to J. R. West School, No. 163, Farragut St. near 14th St.; 82x82 ft.; brick and hollow fireproof tile; slate roof; concrete and wood floors; furnace heat; electric lights; cost \$180,000;

Snowden Ashford, Municipal Archt., District Bldg.; H. D. Watts Co., Contr., Riggs Bldg., Washington, and Garrett Bldg., Baltimore. (Lately noted.)

D. C., Washington.—District Commrs., Room 509 District Bldg., will erect \$40,000 addition to School No. 170, Division Ave. and Haynes St., N. E., Burville; 2 stories and basement; 26x36 ft.; Snowden Ashford, Municipal Archt., District Bldg.; Geo. E. Wyne, Contr., Home Life Bldg. (Lately noted.)

Fla., Lake City.—City will erect \$53,750 high school; lately noted; 60x100 ft.; brick; composition roof; concrete, tile and wood floors; hollow fireproof tile; interior tile; steam heat, \$4000; Edwards & Sayward, Archts., Atlanta, Ga.; Spooner & Cauthern, Contrs., Tifton, Ga.; W. F. Martin, heating, Dothan, Alabama.

Miss., Thyatira.—Board of Trustees of Thyatira Consolidated School Dist. will erect school; 66x50 ft.; 2 stories and basement; cost \$20,000; Ira G. Allen, Supt. of Schools, Senatobia; N. W. Overstreet, Archt., Jackson; Joe McKeller, Contr., Senatobia. (Lately noted.)

N. C., Walnut Cove.—Stokes' Board of Education will erect 4-room school; Dan River Lumber Co., Contr.

Tenn., Memphis.—Shelby County School Board, J. L. Powell, Chrmn., Summer Ave., will expend \$65,000 to improve and erect additions to Treadwell School; 2 stories; Mahan & Broadwell, Archts., American Savings Bank Bldg.; B. W. Cooke, Contr.; J. W. Hull, heating and plumbing; McCrory Electric Co., electric wiring. (Previously noted.)

W. Va., Renick.—Falling Springs Dist. Board of Education, M. P. Hanna, Prest., will erect 3-story and basement brick high school; 8x36 ft.; cost \$25,000; Higginbotham & Knapp, Archts., Charleston; E. D. King, Contr., Marlinton. (Lately noted.)

W. Va., Imman.—Slab Fork School Dist., H. F. Hartley, Prest., Maben, will erect \$50,000 grade school; 2 stories; 70x90 ft.; A. F. Wyson, Archt., Princeton; D. L. Donatus, Contr., Mullens. (Previously noted.)

### Stores.

Ark., El Dorado.—Union Furniture Co. will erect \$29,000 addition to building; 2 stories; brick; 52x90 ft.; tin roof; gas heat; city lights; concrete, tile and wood floors; Witt, Seibert & Halsey, Archts., Texarkana, Ark.; Hope Brick Works, Contr., Hope.

D. C., Washington.—A. B. Mullett & Co., Union Trust Bldg., prepared plans for \$25,000 store at 736-38 Seventh St., N. W.; 3 stories; Meitzler & McKay, Contrs., Oxford Bldg.

D. C., Washington.—Allen E. Walker Co., 813 15th St., will erect building at 14th and Belmont Sts., N. W.; 1 story; E. L. Browning, Contr.

Fla., Tampa.—Mrs. Josephine Parslow will erect store at Tyler St. and Florida Ave.; reinforced concrete and brick; 1 story; cost \$25,000; erect 2 additional stories later at cost of \$50,000 to \$75,000; F. D. Parslow, Archt.; Parslow & Scott, Contrs.

Ga., Columbia.—C. T. Gifford has contract to remodel corner store in Webster Bldg., Broad and 10th Sts.; glass front; cost \$7000.

Ky., Lexington.—L. B. Ingles, 111 Woodland Ave.; will remodel building for stores and offices; 3 stories and basement; 20x50 ft.; John V. Moore, Archt., McClelland Bldg.; Carran Lumber Co., Contr.

Md., Baltimore.—W. C. Hipple will erect addition to building at Chester and Malakoff Sts.; 1 story and basement; 80x80 ft.; slag roof; cost \$12,000; Robert L. Harris, Archt., Calvert Bldg.; Mason & Fox, Contrs., New Amsterdam Bldg.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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Mo., Frederick.—H. F. Shipley will erect \$35,000 storeroom: 35x62 ft.; 4 stories; brick; slag roof; concrete and hardwood floors; steel beams; metal ceilings; steel sash and trim; ventilators; electric lights; passenger elevator, \$5000; B. E. Kemper, Archt.; Lloyd C. Culler, Contr. (Lately noted.)

Mo., Kansas City.—Gondie Bros., 804 Walnut St., will erect store front: cost \$5000; J. E. Taylor, Contr., Reliance Bldg.

Mo., Kansas City.—Jewell Realty Co., Rialto Bldg., will erect \$35,000 store and office building: 2 stories and basement; 45x125 ft.; Wilkinson & Crans, Archts.; Wm. R. Jewell, Contr., Rialto Bldg. (Lately noted.)

Va., Norfolk.—A. C. Hathaway, Dickson Bldg., will expend \$25,000 to remodel store and office building at Granby and Freemason

Sts.; 2 stories; B. B. Spigel, Archt., 112 E. Main St.; Bright & King, Contr., 864 41st St. (Previously noted to erect building.)

W. Va., Charleston.—S. Oberlan, Capitol St., will erect 2-story brick building on Quarrier St.; cost \$20,000; Wallace Knight, Contr.

### Theaters.

D. C., Washington.—Appollo Moving Picture Theater will erect \$10,000 building on H St., N. W.; 1 story; R. W. Geare, Archt., Woodward Bldg.; Chas. Tompkins, Contr., 1612 Park Rd.

Fla., De Funjak Springs.—Murray Bros. will erect \$15,000 moving-picture theater; Garnet Dye, Archt.; H. H. Brown, Contr., both Dothan, Ala.

Fla., Live Oak.—Lon Burton will expend

\$25,000 to remodel old Barton building for picture theater; J. H. Hawkins, Archt. and Contr., 26 Stockton St., Jacksonville.

La., New Orleans.—American Mattress Wks. will erect moving-picture theater; cost \$5000; G. Classen, Contr.

### Warehouses.

Ga., Atlanta.—V. H. Kriegshaber & Son, Greenwood Ave. and Southern Ry., will erect brick and tile warehouse; 1 story; Shelverton Construction Co., Contr.

W. Va., Charleston.—Farris Bros. Co., Morris St., will erect warehouse; 3 stories and basement; 63x100 ft.; H. Rus Warner, Archt., Masonic Bldg.; H. B. Agsten & Son, Contra., Richardson Bldg.

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

**Accordion-plaiting Machine.**—E. G. Billingsley, Pine Bluff, Ark.—Accordion-plaiting machine.

**Air Compressor.**—North Main Service Station, Hal B. Hunter, Mgr., Fort Worth, Tex. Prices on air compressor for garage.

**Art Glass.**—Henry Becker, Ponca City, Okla.—Prices on art glass for \$90,000 church; 72x100 ft.

**Bag (Paper) Machines.**—Arthur V. Smith, Moss Point, Miss.—Names and addresses mfrs. of paper bag machinery; kind made from Kraft paper.

**Band Resawing Machines.**—John G. Duncan Co., 101 Jackson St., Knoxville, Tenn.—Prices on second-hand and rebuilt 40, 42-in. and larger band resawing machines, to saw straight or bevel.

**Beams (I).**—Davis Foundry & Machine Works, I. F. Davis, Prest., Rome, Ga.—10, 12 and 18-in. steel I beams.

**Boiler.**—Christie-Sowards Mining Co., Pikesville, Ky.—50 H. P. portable boiler.

**Boiler.**—E. D. Cranford, Asheboro, N. C.—125 H. P. boiler.

**Boiler.**—Southern Beverage Corp., 5 Charlotte St., Charleston, S. C.—100 H. P. boiler.

**Boilers.**—John G. Duncan Co., 101 E. Jackson St., Knoxville, Tenn.—Dealers' prices on 3 or more 20 H. P. vertical boilers, suitable for hoisting engine work, good for 100-lb. working pressure; submerged tubes preferred; second-hand.

**Bottles.**—National Drug & Chemical Co., B. F. Webb, Prest.-Treas., Box 85, Columbia, S. C.—Names and addresses mfrs. of 4 and 12-oz. bottles, colored glass and otherwise; prices and catalogs.

**Bricks.**—E. D. Cranford, Asheboro, N. C.—Building bricks in quantity.

**Bridge Construction.**—Geo. F. Hand, Chk., Meridian, Miss.—Bids until Mch. 9 to build 40-ft. and 30-ft. bridges over Creek near Bishop Pl.; plans, etc., with Chancery Chk.

**Bridge Construction.**—B. M. McCully, Chk., Winston County Supprs., Louisville, Miss.—Bids until Mch. 7 to build bridges over Holmes Mill, Pennyhook and Deer creeks; construct roads.

**Bridge Construction.**—Wake County Commissioners, H. D. Raud, Chmn., Raleigh, N. C.—Bids until Mch. 8 to build 2 steel bridges and substructures, including 220-ft. bridge over Nuse River and 65-ft. bridge over Swift Creek; plans, etc., with C. M. Miller, Highway Engr.

**Bridge Construction.**—Concordia Parish Police Jury, John Dale, Jr., Secy., Vidalia, La.—Bids until Apr. 2 to build bridge across Cross Bayou or Wild Cow Bayou, or both.

on Black River; creosote pile or steel bridge; information on file.

**Bridge Construction.**—Wilmot Road Dist., Wilmot, Ark.—Bids until Apr. 4 to build steel turn bridge across Bayou Batholomew; total length 388 ft.; width of draw span 150 ft.; substructure of concrete, superstructures of steel with 3-in. wooden floor.

**Bridge Construction.**—Hugh F. Little, Chmn., McDowell County Highway Comsn., Marion, N. C.—Bids until Mch. 7 to construct 5½ mi. highway from Cherry Springs, in Crook Creek Township, McDowell County, to Stone Mountain Church; information concerning plans, etc., from J. L. Martin, Engr., Bridgewater, N. C., or W. T. Morgan, Marion, N. C.

**Bridge Construction.**—Forsyth Special Road Dist., Forsyth, Mo.—Bids until Mch. 11 to build 492.75-ft. bridge over White River; three 149-ft. high truss spans, structural steel, and two 20-ft. approach spans; \$45,750.00; plans, etc., with County Chk., in office of Div. Engr., H. P. Moberly, Woodruff Bldg., Springfield, Mo., and State Highway Dept., Jefferson City, Mo.; R. G. Campbell, Engr., Forsyth Special Road Dist.

**Bridge Construction.**—Geo. H. Maurer, Secy., Moore County Highway Comsn., Carthage, N. C.—Bids until Mch. 7 to rebuild Reynolds Mill bridge over Bear Creek, including rebuilding 25-ft. span, erecting 80-ft. span, etc.; plans, etc., from Recorder, Pinchurst, N. C., or at Pinchurst General Office, Pinchurst, N. C.

**Bridge Construction.**—A. F. Bardwell, Secy., Park Commrs., Fort Worth, Tex.—Bids until Feb. 21 to build steel bridge over Sycamore Creek in Sycamore Park; plans, etc., from City Engr.

**Building Material.**—Christie-Sowards Mining Co., Pikesville, Ky.—Lumber for dwellings.

**Building Materials.**—Miller-Buick Co., Chas. F. Miller, Propr., Florence, Ala.—Prices on steel trusses for 77x170-ft. garage.

**Building Materials.**—Washington Lodge No. 2, F. and A. M. Quincy, Fla.—Prices on building materials for 4-story Masonic temple.

**Building Material.**—John R. Snelgrove, Chnkscales St., Anderson, S. C.—Prices on building material for dwelling, including doors, sash, locks, nails, roofing, plaster, paints and gauze wire.

**Building Material.**—Frank Gabbert, 917 Leitchfield St., Owensboro, Ky.—Prices on building material for \$8500 stable, including Portland cement, hydrated lime, shell metal roofing and siding (black and galvanized), metal ceilings, wall board.

**Building Materials.**—State Road Dept., H. B. Phillips, Chmn., Tallahassee, Fla.—Bids until Feb. 26 to furnish 2000 bbls. Portland cement, 1000 cu. yds. sand, 1500 cu. yds. Florida flint rock or slag, 140,000 lbs. steel reinforcement.

**Carbon-coating Machinery.**—Ribbon Works, J. D. Claitor, Prest.-Mgr., Galveston, Tex.—Names and addresses mfrs. of carbon-coating machinery and carbon tissue for type-writer, adding machine and multigraph machines.

**Cars (Dump).**—Wm. B. Grimsshaw Co., Drexel Bldg., Philadelphia, Pa.—About 50 1½ to 2-yd. 24-in. gauge steel V-shape dump cars; might use 36-in. gauge; Koppel or other good make.

**Cartons, etc.**—National Drug & Chemical Co., B. F. Webb, Prest.-Treas., Box 85, Columbia, S. C.—Names and addresses mfrs. of cartons and corrugated paper carriers for bottles.

**Cement.**—C. B. Rogers, Warden-General, Capitol, Montgomery, Ala.—Prices on cement for State prison at Speigner; about 600x40 ft.; 3 stories.

**Coach (Passenger).**—Pennsylvania Equipment Co., 1420 Chestnut St., Philadelphia, Pa.—Wooden passenger coach with steel or semi-steel underframe, having baggage, passenger and smoker compartments.

**Cold Storage.**—J. N. Major, Front Royal, Va.—Invites bids for construction of 50,000-lb. capacity apple cold-storage plant.

**Cold-storage Plant.**—See Creamery Machinery.

**Contractors Equipment.**—Frank Gabbert, Leitchfield St., Owensboro, Ky.—Prices on contractors wood-working machinery.

**Conveyors.**—Phospho-Germ Mf. Co., Richmond, Va.—Screw conveyors.

**Creamery Machinery.**—Leon County Milk Co., L. R. Bradley in charge, Tallahassee, Fla.—Prices on machinery for complete creamery and cold-storage plant.

**Crushing (Cane) Machinery.**—Southern Beverage Corp., 5 Charlotte St., Charleston, S. C.—Cane-crushing machinery.

**Dam Construction.**—Water Board, Wm. Megraw, Prest. and Water Engr., Baltimore, Md.—Will open bids about Mch. 16 to raise concrete dam at Loch Raven, on Gunpowder River, from 188 to 210 ft.; work will include 40,000 cu. yds. concrete; stone may be quarried by contractor from Water Dept. quarry, 2000 ft. from dam.

**Dehydrating Plant.**—A. P. Spencer, Gainesville, Fla.—Names and addresses mfrs. of small dehydrating plants for fruits and vegetables.

**Digging (Potato) Machine.**—Nell Brothers,

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



Jackson and Madison Sts., Thomasville, Ga. Correspond with mfrs. of machine to dig sweet potatoes.

**Ditch Construction.**—North Carolina Farms Co., New Holland, N. C.—To contract for 300,000 yds. of ditch excavation; no grubbing or clearing.

**Dyes and Chemicals.**—Ribbon Works, J. D. Claitor, Prest.-Mgr., Galveston, Tex.—Names and addresses mfrs. of dyes and chemicals for inking ribbons and coating carbons for typewriter, adding machine and multigraph machines.

**Electrical Supplies, etc.**—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Mch. 12 to furnish: Electrical supplies and equipment; insulated wire and cable; fuses; steel pins; pliers; link pins; screws; springs; copper and brass tubing; brass, bronze and copper sheets; bronze and copper bars; valves; pipe fittings; files; reamers; wrenches; bell metal; nails; zinc; paint; pots; brushes; horsehide gloves; chair seats; chair cane; pulleys; locks; hinges; scythe; stones; tacks; gasoline; torches; tires and tubes; coated fabric; rakes; petroleum spirits; twine; writing fluid, etc. Blank forms and information (Circular 1437) on application to offices of: Panama Canal; Asst. Purchasing Agts. at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

**Engine.**—Southern Beverage Corp., 5 Charlotte St., Charleston, S. C.—120 H. P. engine.

**Engine.**—E. D. Cranford, Asheboro, N. C.—100 H. P. Corliss engine.

**Engine.**—See Generator, etc.

**Engines.**—Superintendent of Lighthouses, New Orleans, La.—Bids until Feb. 28 to furnish two 32 to 37 H. P. gasoline marine engines, 4-cylinder, 4-cycle; information on application.

**Evaporator.**—Southern Beverage Corp., 5 Charlotte St., Charleston, S. C.—Evaporator.

**Excavator.**—W. A. Browning, 3031 Elm St., Dallas, Tex.—Second-hand Keystone excavator.

**Excelsior Machinery.**—R. A. Easterling, Treas. Edisto Public Service Co., Denmark, S. C.—Names of mfrs. of excelsior mchy.; also addresses of parties interested in establishing plant.

**Filter (Syrup).**—Southern Beverage Corp., 5 Charlotte St., Charleston, S. C.—Syrup filter.

**Foundry Equipment.**—J. P. Stanton, North Memphis Machine Works, Memphis, Tenn.—Broaches, milling machines, gear cutters and tool grinders.

**Foundry Materials.**—J. P. Stanton, North Memphis Machine Works, Memphis, Tenn.—Steel and semi-steel castings, gear blanks, Shelby tubing.

**Garage Equipment.**—Miller-Buick Co., Chas. F. Miller, Propr., Florence, Ala.—Prices on garage equipment.

**Generator Set.**—High Point Machine Works, High Point, N. C., Shelby E. Corbitt, Sales Engr.—Dealers' prices on 250 K. W. 3-phase 60-cycle 440 or 550-volt generator, direct connected to suitable Corliss engine; second-hand.

**Generator, etc.**—Pennsylvania Equipment Co., 1420 Chestnut St., Philadelphia, Pa.—Second-hand 150 K. W. D. C. generator, 250 to 275 volts, belt driven; engine large enough to operate 2 generators of this size.

**Generator Sets.**—Wm. B. Grimshaw Co., Drexel Bldg., Philadelphia, Pa.—100 K. W. 250-volt D. C. motor generator sets, direct

connected to 2300-volt 60-cycle 3-phase motor, synchronous type preferred; modern, complete and good condition.

**Handles (Bones, Ebony, etc.).**—Everglades Broom & Brush Factory, Moore Haven, Fla. Bone, ebony and celluloid whisk-broom handles.

**Hardware.**—John R. Snelgrove, Clinck-scales St., Anderson, S. C.—Prices on locks and nails. (See Building Material.)

**Heating Plant.**—Henry Buckner, Ponca City, Okla.—Prices on heating plant for church; 72x103 ft.

**Heating Plant.**—Rev. R. L. Baker, Carbon Hill, Ala.—Prices on hot-air furnace for church.

**Heating Plant.**—Walters Institute, Jas. W. Eichelberger, Jr., Prest., Warren, Ark.—Prices on heating plant for 3-story dormitory; 42x100 ft.

**Hose (Fire).**—Cecil L. Clark, City Clk., Joplin, Mo.—4000 ft. fire hose; \$5600 approximated.

**Implements, etc.**—Potomac Fruit & Supply Co., Wm. B. Connell, Room 4 Journal Bldg., Martinsburg, W. Va.—Prices on supplies or machinery used on farm or orchard.

**Inking (Ribbon) Machinery.**—Ribbon Works, J. D. Claitor, Prest.-Mgr., Galveston, Tex.—Names and addresses mfrs. of ribbon-inking machinery and ribbon cloth for typewriter, adding machine and multigraph ribbons.

**Iron or Steel Bars.**—Davis Foundry & Machine Works, I. F. Davis, Prest., Rome, Ga.—125 bars of iron or steel  $\frac{3}{4}$ -in. x  $\frac{1}{4}$ -in. x 21-ft.; 168 bars iron or steel 3-in. x  $\frac{1}{4}$ -in. x 17-ft. 6-in.

**Lathe.**—City Comsn., John S. Bond, Chrmn., Jacksonville, Fla.—Bids until Mch. 4 to furnish heavy-duty quick chain engine lathe, 24-in. swing and 12 ft. between centers with large and small face plates, compound and follower rest, 2 steel centers and center post, double friction, counter shaft; f. o. b. Jacksonville; state time of delivery.

**Lettering (Gilt and Silver).**—Everglades Broom & Brush Factory, Moore Haven, Fla. Information on applying gilt or silver lettering on velvet ribbon.

**Lighting Plant.**—Walters Institute, Jas. W. Eichelberger, Jr., Prest., Warren, Ark.—Prices on electric-lighting plant for dormitory.

**Lighting Plant.**—Happ & Shelverton, Architects, Macon, Ga.—Data on lighting plant and water equipment for school building, Jeffersonville, Ga.

**Locomotives.**—Wm. B. Grimshaw Co., Drexel Bldg., Philadelphia, Pa.—3 to 6-ton 24-in. gauge gasoline locomotives; Plymouth preferred.

**Locomotive.**—Southern Locomotive & Equipment Co., 1002 Empire Bldg., Atlanta, Ga. Six driver saddle-tank locomotive, rigid wheel base not over 9 ft., weighing in working order approximately 60 tons; 175 lbs. steam pressure; first-class condition.

**Locomotive.**—C. L. Ryley, Prest. Happy Coal Co., 1304 Fayette Bank Bldg., Lexington, Ky.—Storage battery locomotive.

**Lumber.**—J. H. Epperly, East Radford, Va.—Prices on dressed lumber for five \$3000 dwellings.

**Metal Ceilings.**—Frank Gabbert, 917 Leitchfield St., Owensboro, Ky.—Prices on metal ceilings. (See Building Material.)

**Millwork.**—John R. Snelgrove, Clinck-scales St., Anderson, S. C.—Prices on doors and sash. (See Building Material.)

**Mining Machinery.**—Parsons Coal Co., 418 $\frac{1}{2}$  10th St., Huntington, W. Va.—Bids about

June 1 for mining machinery for 1000-ton daily capacity mine.

**Mining Machinery.**—Thomas Widdop, 230 Fifth Ave., Room 605, Pittsburgh, Pa.—Mining machinery for 100 tons crushed marble daily capacity mine.

**Mining Machinery.**—C. L. Ryley, Prest. Happy Coal Co., 1304 Fayette Bank Bldg., Lexington, Ky.—Mining machines.

**Motor.**—Baldwin Petrinite Roof Tile Co., Enos Baldwin, Box 1438, Mobile, Ala.—Second-hand  $7\frac{1}{2}$  H. P. electric motor for mixer.

**Motors.**—Mark Lee, Belle Meade, Va.—Lowest prices on 5 to 10 H. P. motors, 110 volts; state make, condition, R. P. M., accessories.

**Paints.**—John R. Snelgrove, Clinck-scales St., Anderson, S. C.—Prices on paints. (See Building Material.)

**Paper Boxes, etc.**—Ribbon Works, J. D. Claitor, Prest.-Mgr., Galveston, Tex.—Names and addresses mfrs. of paper boxes, metal boxes, shipping containers, etc., for typewriter, adding machine and multigraph ribbons and carbon paper.

**Paving.**—J. C. Sykes, Mayor, Monroe, N. C. Invites bids for \$150,000 street paving; Smith & Klutz, Engrs., Salisbury, N. C.

**Paving.**—City Comsn., John S. Bond, Chrmn., Jacksonville, Fla.—Bids until Mch. 4 to construct 554 sq. yds. tile sidewalks and 33 sq. yds. concrete sidewalk; plans, etc., with City Engr.

**Paving.**—John H. Randolph, Supt. Public Works, Palatka, Fla.—Bids until Mch. 1 to construct sidewalk aprons, consisting of 48 sidewalk aprons of 8 sq. yds. each; specifications with City Clk.

**Paving.**—J. C. Flanagan, City Secy.-Treas., Shreveport, La.—Bids until Feb. 23 to pave Herndon Ave. from Coty to Market St.; asphaltic concrete; plans, etc., with City Engr.

**Paving.**—G. B. Shepard, Director of Finance, St. Petersburg, Fla.—Bids until Mch. 7 to grade, curb and pave streets with vitrified brick, including 11th Ave., N. 12th St., Crown Ave. and others; specifications on file with Director Public Works.

**Paving.**—F. W. Katterjohn, Commr. Public Affairs, Paducah, Ky.—Bids until Feb. 28 to construct and reconstruct driveways on Broadway from east property line of 17th St. to west property line 25th St.; concrete, tarvia, Kentucky rock asphalt; plans, etc., on file; W. M. Mitchell, City Engr.

**Paving.**—City of Danville, Va., R. K. Linville, City Engr.—Bids about Apr. to pave streets; vitrified brick, durax block, sheet asphalt, asphaltic concrete, concrete bituminous macadam; \$300,000.

**Paving.**—Board of Awards, care City Register, Baltimore, Md.—Bids until Mch. 2 to grade, curb and pave streets listed in Contracts 182-OC and 183-OA; sheet asphalt on concrete base; specifications, etc., from Paving Comsn., 214 E. Lexington St.

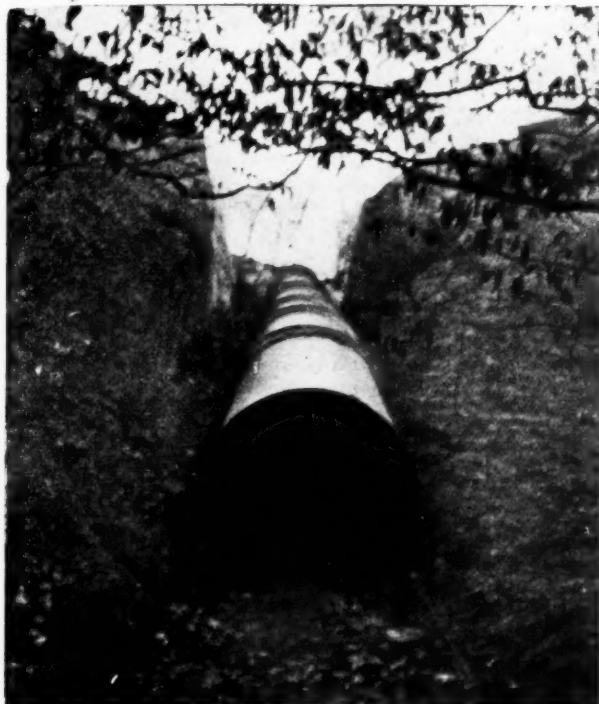
**Paving.**—City of Weleetka, Okla.—Bids until Mch. 16 to pave streets; V. V. Long & Co., Engrs., Oklahoma City, Okla.

**Paving.**—City of Alexandria, La., V. M. Ake, Secy.—Bids until Mch. 7 to pave sidewalks with concrete and construct curbing with cement on east side of 14th St.; sidewalks with concrete on both sides of 7th St.; plans, etc., on file and with City Engr.

**Paving.**—Bonner H. Hill, City Mgr., Charleston, W. Va.—Bids until Mch. 5 to grade, curb and pave streets; 35,000 sq. yds. paving; Ernest Bruce, City Engr.

**Paving.**—S. L. Lloyd, Town Clk., Iversness,

(Continued on Page 132)



An artistic picture—and holding the center of interest, as it should—

## U. S. CAST IRON PIPE

THE PIPE THAT OUTLASTS THE AGES

As the pipe in the picture gives the instant impression of solid and permanent dependability so the rugged construction and perfect finish of United States Cast Iron Pipe gives promise of years of lasting service.

**U. S. PRODUCTS—Cast Iron Pipe—**Bell and Spigot Flange, Flexible Joint. Plain end and threaded. **Fittings**—Standard and Special. **Castings**—Chemical and Machinery.

### United States Cast Iron Pipe & Foundry Co.

Burlington, N. J.

Fla.—Bids until Feb. 18 to construct 2000 ft. concrete sidewalk; specifications on file.

**Paving.**—City of El Paso, Tex., Charles Davis, Mayor.—Bids until Feb. 24 to construct pavement on 250 ft. Myrtle Ave.; specification with City Engr.

**Pipe Organ.**—Henry Bucker, Ponca City, Okla.—Prices on pipe organ for \$90,000 church.

**Pipe.**—City Comsn., John S. Bond, Chrmn., Jacksonville, Fla.—Bids until Mch. 4 to furnish carload 12-in. terra cotta sewer pipe; f. o. b. Jacksonville.

**Pipe.**—Harvey Co., 113 South St., Baltimore, Md.—8000 ft. 2-in. second-hand pipe in good condition; delivery Washington, D. C.

**Planter (Potato).**—Nell Brothers, Jackson and Madison Sts., Thomasville, Ga.—Correspond with mfrs. of machine to plant and water sweet-potatoes.

**Plate Glass.**—Miller-Buick Co., Chas. F. Miller, Propr., Florence, Ala.—Prices on plate glass for 7x170 ft. garage.

**Printing Machinery, etc.**—Bingham-Hogan Co., Thos. W. Bingham, Secy.-Mgr., 1540 Main St., Columbia, S. C.—Invites bids on printing, cutting, stamping, embossing and turning machinery for art and commercial calendars, wood and paper specialties.

**Pump (Air).**—City of Douglas, Ga., M. F. Head, Chrmn. of Water and Light Comsn.—Data and prices on submerged air pump to pump for boilers from pond 1 1/4 mi. from city light plant.

**Pumps.**—Southern Beverage Corp., 5 Charlotte St., Charleston, S. C.—Pumps.

**Pump.**—A. E. Ray, Box 234, Tullahoma, Tenn.—Pump for one-fourth H. P. motor used in pumping sulphur dioxide in a small cold-storage plant.

**Pump Head, etc.**—City of Stroud Water & Light Dept., John A. Walker, Mgr., Stroud, Okla.—Data and prices on double-stroke well pump head and working barrel for electric-motor drive; 80 to 100 G. P. M., against working head of about 200 ft.; available power 220 volts, 60-cycle, A. C., 3-phase.

**Punching Machines.**—Jones Furniture & Storage Co., 639 W. Forsyth St., Jacksonville, Fla.—Correspond with mfrs. of punching machines used in manufacture of bed springs.

**Reinforcing Bars.**—C. B. Rogers, Warden-General, Capitol, Montgomery, Ala.—Prices on reinforcing steel bars for State prison and manufacturing plant at Spelgner; about 600x40 ft.; 3 stories.

**Ribbon Cloth.**—See Inking (Ribbon) Machinery.

**Rig Irons.**—Moore Oil & Gas Co., Herman Moore, Huntington, W. Va.—Rig irons.

**Road Construction.**—B. M. McCully, Clk. Winston County Supvrs., Louisville, Miss.—Bids until Mch. 7 to construct roads and bridges.

**Road Construction.**—Augusta County Supervisors, Staunton, Va.—Bids until Feb. 23 to construct 23 mi. water-bound macadam road; plans, etc., with County Road Supt.

**Road Construction.**—Falls County, E. M. Dodson, County Judge, Marlin, Tex.—Bids until Mch. 1 to construct 46 mi. gravel surfaced roads in Precinct No. 1; G. W. Courter, County Engr.

**Road Construction.**—Taylor County Court, Frank Bennett, Clk., Grafton, W. Va.—Bids until Mch. 30 to construct 13 mi. roads; plans, etc., on file; W. Steenbergen, Ch. Engr.

**Road Construction.**—Rusk County, J. T. Watson, County Judge, Henderson, Tex.—Bids until Feb. 24 to construct roads on

State Highways 26 and 43; Hess & Skinner, County Engrs., Southwestern Life Bldg., Dallas, Tex.

**Road Construction.**—Dallas County, Chas. E. Gross, Auditor, Dallas, Tex.—Bids until Mch. 3 to improve Miller's Ferry Rd.; plans, etc., from Nagle-Witt-Rollins Engineering Co., District Engrs.

**Road Construction.**—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Mch. 8 to construct 3.6 mi. concrete road from Showell to Delaware State line; Worcester County, Contract WO-18; plans, etc., on file.

**Road Construction.**—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Mch. 8 to construct 3 mi. concrete road from end Contract T-11 toward Easton; Talbot County, Contract T-14; plans, etc., on file.

**Road Construction.**—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Mch. 8 to construct 2.25 mi. concrete road from Bethel Church to Black Horse; Harford County, Contract H-25; plans, etc., on file.

**Road Construction.**—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Mch. 8 to construct 1.4 mi. concrete road from Morantown to Allegany; Allegany County, Contract A-18; plans, etc., on file.

**Road Construction.**—Catoosa County Commissioners Roads and Revenues, L. R. Wiggins, Chrmn., Ringgold, Ga.—Bids until Mch. 18 to construct 8 1/4 mi. chert-surfaced road between Ringgold and Tennessee State line, known as Blue Ford Rd., Section A of Project No. 71; 21,202 cu. yds. chert surfacing, etc.; plans, etc., on file at Ringgold, with Div. Engr., Rome, Ga., and State Highway Engr., Walton Bldg., Atlanta, Ga.

**Road Construction.**—Virginia State Highway Comsn., 116 S. 3d St., Richmond, Va.—Bids until Mch. 8 to construct 5.4 mi. gravel road on State Road No. 7 in Spotsylvania and Orange counties, between Chancellorsville and Wilderness Run; Virginia Project No. 92; plans, etc., on file at Richmond and with Resident Engr., Fredericksburg, Va.

**Road Construction.**—Virginia State Highway Comsn., G. P. Coleman, Commr., 116 S. 3d St., Richmond, Va.—Bids until Mch. 8 to construct 3.37 mi. soil road on State Road No. 10 in Prince Edward County, between Bush River bridge and Rice; plans, etc., on file at Richmond and with Resident Engr., Lynchburg, Va.

**Road Construction.**—Virginia State Highway Comsn., G. P. Coleman, Commr., 116 S. 3d St., Richmond, Va.—Bids until Mch. 8 to construct 2.1 mi. bituminous macadam road on State Road No. 17 in Rockingham County, between Dayton and Bridgewater; Virginia Project No. 95; plans, etc., on file at Richmond and with Resident Engr., Staunton, Va.

**Road Construction.**—Walnut Ridge-Alicia Road Improvement Dist., A. G. Albright, Secy., Powhatan, Ark.—Bids until Feb. 28 to construct 28 mi. gravel and plain concrete road in Walnut Ridge-Alicia Road Improvement Dist., Lawrence County; plans, etc., with Dickinson & Watkins, Engrs., Walnut Ridge, Ark., and Little Rock, Ark., and with State Highway Dept., Little Rock, Ark.

**Road Construction.**—Lawrence County, Harry Whaley, County Clk., Mt. Vernon, Mo.—Bids until Mch. 4 to construct roads, Project No. 42; 10.43 mi.; culverts and bridges; W. R. Shanklin, Engr., Sedalia, Mo.

**Road Construction.**—Randolph County, G. H. Jackson, County Clk., Huntsville, Mo.—Bids until Feb. 28 to construct 1.66 mi. concrete or brick road, Project No. 22; Carl Haynes, County Engr.

**Road Construction.**—Johnson County,

Theo. Hyatt, County Clk., Warrensburg, Mo.—Bids until Feb. 25 to construct roads and bridges, Project No. 10; 1.65 mi.; J. W. Wilson, County Engr.

**Road Construction.**—Highway Dept., Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids until Mch. 2 to construct 3.55 mi. Opelousas-Arnaudville highway; information from Highway Dept., New Orleans, La., or L. Durio, Parish Engr., Opelousas, La.

**Roofing.**—John R. Snelgrove, Chickscales St., Anderson, S. C.—Prices on roofing for dwelling. (See Building Material.)

**Roofing.**—Miller-Buick Co., Chas. F. Miller, Propr., Florence, Ala.—Prices on roofing for 7x170-ft. garage.

**Roofing and Siding.**—Frank Gabbert, 917 Leitchfield St., Owensboro, Ky.—Prices on black and galvanized sheet metal roofing and siding. (See Building Material.)

**Sand and Gravel.**—C. B. Rogers, Warden-General, Capitol, Montgomery, Ala.—Prices on sand and gravel for State prison at Spelgner.

**Saws.**—John G. Duncan Co., 101 E. Jackson St., Knoxville, Tenn.—Jobbers' prices on 20, 24, 30 and 36-in. second-hand hand saws; power driven.

**Sewers.**—City of Macon, Miss., John A. Tyson, Chancery Clk.—Bids until Mch. 7 to construct sewer system at courthouse; plans, etc., on file.

**Scales (Track).**—No. 4 Superior Coal Co., 1304 Fayette Bank Bldg., Lexington, Ky.—Track scales.

**Sewers.**—City of Tampa, Fla., Chas. H. Brown, Mayor.—Bids until Feb. 22 to construct concrete storm sewer on 15th St. from head of estuary to Fourth Ave., and on Fourth Ave., from 15th St. to 14th St.; plans, etc., with City Engr.

**Sewer Construction.**—City of Wynona, Okla., Dr. Prentiss, Mayor.—Bids until Feb. 21 to construct and install sewer and sewage disposal plant system; plans, etc., with City Clk., Wynona, and from Green Engineering Co., Engr., Oklahoma City.

**Sewer Material.**—City of South Jacksonville, Fla., R. M. Rogero, City Clk.—Invites bids on following: 9700 lin. ft. 8 to 10-in. T. C. pipe, 100 10x5 Y's, 300 8x5 Y's, 22 M. H. covers and rings, 14 F tanks, 150 bbls. cement, 65 cu. yds. stone for concrete, 50 cu. yds. sand; send bids at earliest date practicable.

**Sewer System, etc.**—Walters Institute, Jas. W. Eichelberger, Jr., Prest., Warren, Ark.—Sewer and waste-disposal systems for dormitory.

**Shaft (Coal).**—J. L. Dillard, 110 3d St. N. E. Washington, D. C.—To contract for construction of modern shaft complete for 1500-ton daily capacity coal mine, electrically equipped.

**Shovels.**—W. A. Browning, 3031 Elm St., Dallas, Tex.—3/4-yd. and 1/2-yd. steam shovels; second-hand.

**Sprinkler System.**—Phospho-Germ Mfg. Co., Richmond, Va.—Sprinkler system.

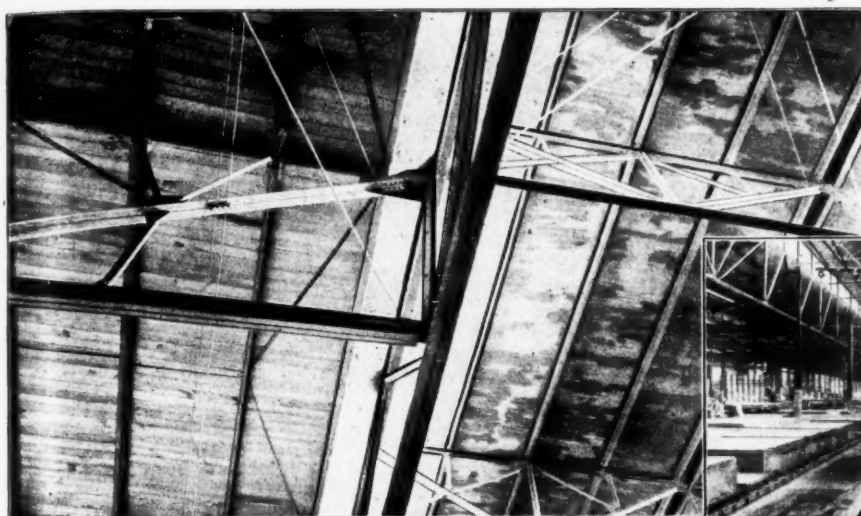
**Structural Steel Frame, etc.**—Port of New Orleans Commrs., Suite 200, New Court Bldg., New Orleans, La.—Bids until Mch. 22 for complete furnishing and erecting structural steel for 4th St. freight shed; plans with Ch. Engr., No. 1 Canal St.

**Textile Equipment.**—Helena Spinning Co., C. J. Rhodes, Secy.-Treas., West Helena, Ark.—Prices on pickers; 40-in. breaker with automatic feeder; 40-in. intermediate; 40-in. finisher lapper.

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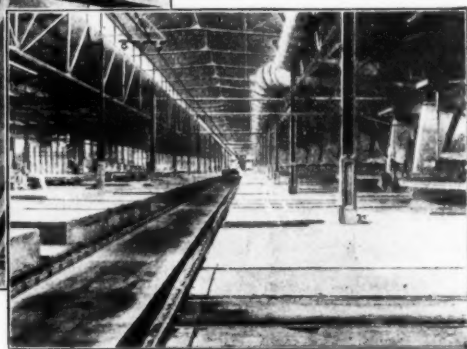
In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.





Carbosoted sheathing in place at left, and disintegrating cement ceiling at right.

General view of polishing room of large plate-glass works. Carbosoted sheathing being placed at left.

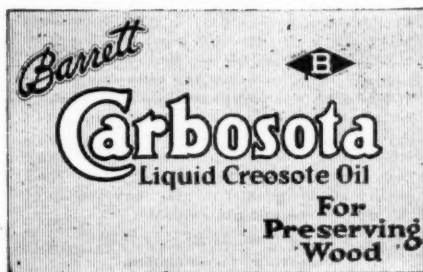


## Combating Roof-Deck Failures—

THE economy of creosoted wood for roof-deck construction wherever abnormal humidities prevail is strikingly shown by the recent experience of a large plate glass manufacturer.

The roof-deck of the glass factory was reinforced concrete. Shortly after operations were begun in the plant it was discovered that humidity was causing the cement ceiling to disintegrate. Chips of cement fell from the ceiling of the polishing room, doing serious damage to glass undergoing the finishing process.

To cure this condition it was necessary to sheath the roof-deck—an area of over 200,000 square feet. The sheathing (1" x 6" boards) and the stringers (2" x 4" scantling) were cut to size, treated with Carbosota Liquid Creosote Oil, assembled into sections and the sections bolted to the



trusses. This has proved a very satisfactory solution of the difficulty.

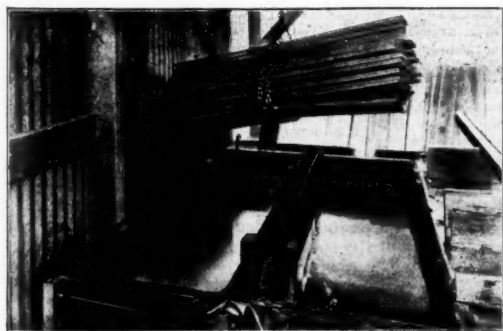
But if, in the first place, the roof-deck had been built of carbosoted lumber of proper thickness, much of the construction cost would have been saved, and the loss in the polishing-room caused by falling cement would have been entirely avoided.

As wood causes minimum condensation, it is the most satisfactory structural material wherever excessive humidities exist. When the lumber is protected from decay by preservative treatment, it becomes also the most durable and most economical material that can be used. This applies with special emphasis to paper, textile, starch and copper stamp mills.

*Carbosota Liquid Creosote Oil is the standard wood preservative for all non-pressure treatments.*

If you will write for Special Folder No. 408, entitled "Preserving Wood Roof-Decks With Carbosota," a copy will be sent free of charge.

*(Green wood cannot be effectively creosoted by non-pressure processes. It should be seasoned. All framing, drilling of bolt holes, etc., should be completed before treatment. If this is impossible, two brush coats of Carbosota should be applied to all untreated surfaces exposed by subsequent cutting or drilling.)*



Creosoting sheathing by the Open Tank process with Carbosota Liquid Creosote Oil.

## The Barrett Company

New York	Chicago	Philadelphia	Boston	St. Louis
Cleveland	Cincinnati	Pittsburgh	Detroit	New Orleans
Birmingham	Kansas City	Minneapolis	Dallas	Nashville
Syracuse	Seattle	Peoria	Atlanta	Duluth
Salt Lake City	Bangor	Washington	Johnstown	Lebanon
Youngstown	Milwaukee	Toledo	Columbus	Richmond
Lafayette	Bethlehem	Elizabeth	Buffalo	Baltimore
Omaha	Houston	Denver	Jacksonville	

THE BARRETT COMPANY, LIMITED: Montreal Toronto Winnipeg  
Vancouver St. John, N. B. Halifax, N. S.

**Tipples.**—No. 4 Superior Coal Co., 1304 Fayette Bank Bldg., Lexington, Ky.—Tipples.

**Tipples.**—C. L. Ryley, Prest. Happy Coal Co., 1304 Fayette Bank Bldg., Lexington, Ky. Tipples.

**Tipples.**—C. L. Ryland, Prest. Trace Fork Mining Co., 1304 Fayette Bank Bldg., Lexington, Ky.—Tipples.

**Tools (Pneumatic).**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids until Mch. 1 to deliver pneumatic tools to the Navy-yard, Charleston, S. C.; plans on file or with supply officer at Navy-yard.

**Trucks.**—V. M. Cooper & Co., care of Manufacturers Record, Baltimore, Md.—Data and prices on freighthouse, station and baggage trucks for handling miscellaneous freight around terminals and stations.

**Valves.**—A. E. Ray, Box 234, Tullahoma, Tenn.—Expansion valves used on sulphur dioxide pumping outfits for cold-storage plants.

**Water Equipment.**—Happ & Shelverton, Architects, Macon, Ga.—Data on water plant for school building, Jeffersonville, Ga.

**Water-works Construction.**—City of Wynona, Okla., Dr. Prentiss, Mayor.—Bids until Feb. 21 to construct and install water-works; plans, etc., with City Clk., Wynona, and from Green Engineering Co., Engr., Oklahoma City.

**Wall Board.**—Frank Gabbert, 917 Leitchfield St., Owensboro, Ky.—Prices on wall board. (See Building Material.)

**Water-Works Construction.**—City of Paragould, Ark., Guy Adams, Secy. of Comms. of Water Dist. No. 3.—Bids until Apr. 12 to construct 4 mi. water mains, with valves and fire hydrants, power plant building, power and pumping equipment; plans, etc., from W. R. Hengker & Sons, Engrs., Bertig Office Bldg., Paragould, or Hiram Phillips, Consit. Engr., 201 Fullerton Bldg., St. Louis, Mo.

**Water-Works Equipment.**—City of Norfolk, Va., Walter H. Taylor, 3d, Director of Public Works.—Bids until Mch. 17 for the following: 15,000,000-gal. cross compound pumping engine, three 25 H. P. straight tube, horizontal, water tube boilers, extension of present brick stack, 500 H. P. open feed water heater, two 500 H. P. boiler feed pumps, industrial track, coal and ash handling equipment, feed water regulators; plans, etc., on file or with J. N. Chester Engineers, 1111 Union Bank Bldg., Pittsburgh, Pa.

**Well.**—Walters Institute, Jas. W. Eichelberger, Jr., Prest., Warren, Ark.—Prices for sinking deep well for dormitory and in stallings fixtures.

**Wheels (Tractor).**—L. L. Richardson, 119 Sunset Ave., Sarasota, Fla.—2 tractor wheels, 6-ft. diam., with 20-in. face; 24-in. wheel in diam. with 18-in. face.

**Windows (Frame).**—Miller-Buick Co., Chas. F. Miller, Propr., Florence, Ala.—Prices on frame windows for 77x170-ft. garage.

**Woodworking Machinery.**—E. D. Craunford, Asheville, N. C.—Mchy. for mfr. of chairs and porch rockers.

**Woodworking Machinery.**—Frank Gabbert, 917 Leitchfield St., Owensboro, Ky.—Prices on wood-working machinery. (See Contractors Equipment.)

## Railroad Construction

### Railways.

Ky., Pineville.—Plans are reported being made for the construction of a railroad from

Middlesboro, Ky., via Pineville, and Wayland, Ky., to Williamson, W. Va., about 125 mi. Indianapolis and Cincinnati capitalists and Kentucky, West Virginia and Ohio coal operators said to be interested. Frank Fitzgibbons of Pineville, Ky., may be able to give information.

La., Mansfield.—Mansfield Railway & Transportation Co. will build an oil-field extension

about 1½ mi. long, it is reported. W. R. McCrocklin is Gen. Mgr.

### Street Railways.

Tex., Fort Worth.—Northern Texas Traction Co. has completed plans to build an extension several blocks long. Another extension is already under way. G. H. Clifford is Mgr.

## INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

### High Intensity Illumination.

An interesting industrial lighting exhibit is now touring the country under the direction of the Edison Lamp Works of the General Electric Co., Schenectady, N. Y., this being part of a broad educational movement for better illumination. Demonstrations are made in a portable room, which consists of a frame of iron piping supporting canvas walls and ceilings, through which are hung various types of lights and reflectors. There are seats for about 50 persons. To show that greater speed and accuracy and less spoilage in industrial plants depend directly on adequate illumination, the results of several tests made recently in factories are shown. The effect of the exhibit is to stimulate sales and interest business men in better lighting, as well as to broaden the market for electric lighting equipment, thereby benefiting both central stations and retailers. In addition to the reduction of spoilage in factories, it is said that tests show that with high intensity industrial illumination the actual production per man has been increased from 10 to 25 per cent. The quality of the product is also improved and the number of accidents reduced.

### Important Consolidation.

The Locomotive Superheater Co. of New York city has acquired the patents and business of the Locomotive Feed Water Heater Co. Feed-water heating and superheating have many factors in common, and the Locomotive Superheater Co. will conduct the further application of the apparatus for pre-heating feed water through their regular engineering, inspection and service organizations, to which has been added the operating organization of the Locomotive Feed Water Heater Co. This consolidation of resources and effort promises more intensified development and better service to the railroads.

### Appointed District Manager.

The Truscon Steel Co. of Youngstown, O., who maintain a branch office at 1307 Syndicate Trust Bldg., St. Louis, Mo., have appointed C. C. Beal as district manager there. Mr. Beal has been connected with the company for a good many years, and most recently as warehouse sales manager at Youngstown.

### Making Over Old Hickory, Tenn.

Meigs, Bassett & Slaughter, Inc., chemical engineers, 219 South 13th St., Philadelphia, have been appointed the consulting chemical engineers on the work that is being done at what was formerly the Old Hickory powder plant near Nashville, Tenn. The purpose is to make Old Hickory, as the place is known, an industrial town for a great variety of manufactures, powder making being a thing of the past in the minds of everyone there. The engineering firm is making a survey of

the plant and will soon present its report thereon, after studying the uses to which the various units of the plant may be adapted. The investigations are about completed, and the report will be checked up in minute detail. There will be a resident engineer stationed at the plant, so that he may be in close touch with the situation at all times. One part of the plant can be adapted for the manufacture of dyes, sugar manufacturing is also possible with another part, besides many other industries. The magnitude of the layout, including the town, which could accommodate 6000 or 7000 population immediately, is eloquent of the future. There are from 1100 to 1200 six-room dwellings, which the Nashville Industrial Corporation is renting at what are said to be attractive prices. There are now about 2000 persons living in this town, which was constructed in haste, but thoroughly, it is said, and with complete sanitary features.

### Improved Merchandising Methods.

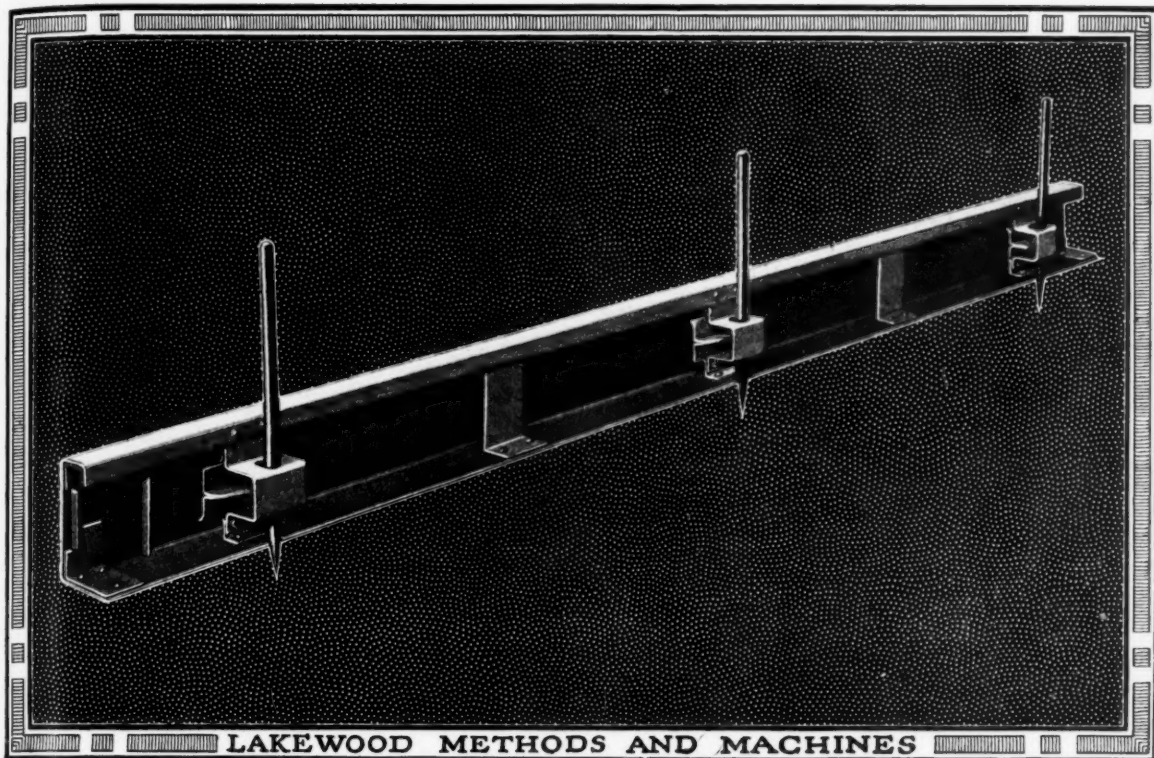
The merchandising conference for 1921, under the auspices of the General Electric Co. and seven allied or affiliated companies (Duplex Lighting Works of the General Electric Co., Edison Electric Appliance Co., Edison Lamp Works of General Electric Co., Electric Vacuum Cleaner Co., Hurley Machine Co., Ivanhoe Regent Works of General Electric Co. and Sprague Electric Works of General Electric Co.), which is touring the country, is now on its second trip. The itinerary for March includes the following cities: March 2-3, Houston; 4-7, Dallas; 9-10, Kansas City; 11-12, St. Louis; 14-15, Indianapolis; 16-17, Cincinnati. The first conference of the second itinerary was held at Washington February 16-17, followed by others at Jacksonville, Atlanta and Birmingham. The schedule calls for a conference at Memphis February 25-26 and at New Orleans February 27-28 and March 1. On the first trip New York, Philadelphia, Pittsburgh, Columbus, Cleveland, Toledo, Buffalo, Rochester and Syracuse were visited. These conferences are a liberal education in merchandising methods, including salesmanship, window trimming and advertising.

### Friction Saw for Cutting Steel.

A new high-speed friction saw for the rapid cutting of structural steel was recently developed by Joseph T. Ryerson & Son, Chicago. The machine consists of a very heavy cast-iron base of box section, supporting a horizontal traveling carriage, to which the motor is bolted. Large rollers on ball bearings are mounted on eccentric shafts to provide adjustment for wear and also to facilitate the movement of the saw carriage. Bolted directly to the saw-blade side of the carriage is a hood of heavy sheet metal arranged to be

(Continued on Page 136)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



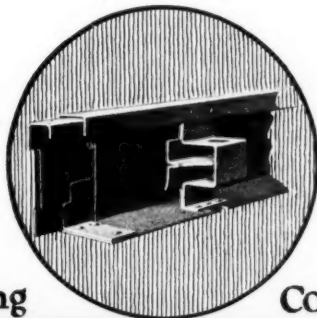
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Complete description of the Lakewood-Hotchkiss Road Form in a new 16-page booklet—which also shows Lakewood-Hotchkiss Forms for all kinds of concrete construction.

*Write for a copy.*



**The Lakewood Engineering**

**Company, Cleveland U.S.A.**



(Continued from Page 134.)

opened to examine or to remove the blade. The direct mounting of the disc or blade on the armature shaft of the special heavy-duty motor, developed after several years' experiments, and an improved feeding mechanism are features. The firm has issued bulletins illustrating and describing these machines.

#### Change of Location.

A change of address is announced by the Machinery Clearing House Corp., jobbers of machinery and supplies, Baltimore, Md., from 119 E. Lexington St. to 718 E. Pratt St., in the Coca-Cola Bldg., where they will maintain their office and showroom. They also have part of the ground floor of the McCormick Bldg., on Concord St. and the Fallsview, and carry motors, starters and electrical goods in addition to their regular line of machine tools.

#### Appointed District Manager.

George J. Blanton, for the past four years connected with the engineering sales department of the Chain Belt Co., Milwaukee, has been made New York district manager. Before this connection Mr. Blanton was with the General Electric Co. for eight years. He has had a broad experience in engineering sales, and also possesses comprehensive practical knowledge of the chain industry. Mr. Blanton is a graduate of the University of Michigan, department of mechanical and electrical engineering, class 1909. He will immediately take charge of the company's offices at 50 Church street, New York city.

#### A Goodfellowship Organization.

At the Marine Exposition held in Grand Central Palace, New York city, recently announcement was made at the booth of the Plymouth Cordage Co. of North Plymouth, Mass., of the organization of the Plymouth Cordage Hospitality Club, membership in which is free, and an invitation was extended to everyone to join. Simultaneously, hardware dealers, West, South and East, extended similar invitations to their customers and others. The reason for this club, it is explained, is the fact that next summer there will be celebrated at Plymouth, Mass., the 30th anniversary of the establishment of the Plymouth colony and that thousands of visitors will be there. A brick clubhouse is being erected, information bureaus will be established and special facilities for recreation are to be provided. For those who cannot attend the celebration—and they will be many more than those who can be there—a series of souvenir booklets is being prepared, and the first is now ready, containing the address of Calvin Coolidge, Vice-President-elect of the United States, which was delivered December 29, 1920, at the 30th anniversary exercises of the actual landing of the Pilgrims. Others will be sent out from time to time. The information bureau will give information about travel, motor routes, hotels, etc. Goodfellowship is the keynote. There are no dues.

#### Contract for Industrial Building.

The H. K. Ferguson Company, engineers and builders, of Cleveland, have been awarded a contract by the Fairfield Paper Co. of Baltimore, O., for the erection of a 2-story reinforced concrete building 90x800 feet, equipped, to cost about \$400,000. It is to be used in the manufacture of paper and paper boxes.

#### Representative Appointed.

Thomas R. Mechem will represent Wadsworth, Howland & Co., Inc., 139-141 Federal St., Boston, Mass., paint and varnish manufacturers, among the hotel and institute trade through the Atlantic Coast States and including the Middle and South Atlantic States. Mr. Mechem, who is a practical paint man knowing the requirements of this trade, was for a number of years with the decorating and painting department of "White Sulphur Springs, Inc." at White Sulphur Springs, W. Va., and he is also well known in Eastern Virginia, Maryland and Delaware. He is a native of Harford county, Maryland. Any inquiries concerning proper paint treatment for such buildings as come under his department may be addressed to Mr. Mechem at the Boston address.

#### A Record of Progress.

"Community Accomplishments, 1920," is the truthful and appropriate title given to the yearbook issued by the Pittsburgh Chamber of Commerce, Pittsburgh, Kans., and which contains the salient facts concerning the city's progress during the past year and its promise for the future. There is also a complete list of members of the organization and a number of pictures of the officials, who are D. W. Jones, president; Mark Musgrave, first vice-president; Frank W. Newman, second vice-president; Mandel Sener, secretary. The book is finely printed and attractively and interestingly written.

#### Landscape Development.

E. S. Draper, landscape architect and city planner, Charlotte, N. C., has been retained by John D. Stockton to plan the development of grounds and his proposed new residence on West End Boulevard at Winston-Salem, N. C. Other commissions which Mr. Draper will execute are: Landscape development of the estate of Mrs. H. A. Foushee, Durham, N. C., on which actual work has begun; redevelopment of estate of W. J. Roddey, Rock Hill, S. C., and planning of residence grounds for the new home of Dunlap Roddey of the same place.

#### Kansas City Office Opened.

The National Steel Fabric Co. of 902 First National Bank Bldg., Pittsburgh, Pa., have opened a sales office in the Mutual Bldg., Kansas City, Mo., under the charge of H. H. Robinson.

#### Big Contract for Motor Trucks.

The Cyclone Starter & Truck Co. of Greenville, S. C., recently shipped a carload of trucks to their dealers at Orlando, Fla.—William E. Smythe & Son. It is also of additional interest to note that the company has just closed a contract with the Mint-Cola Company of Salisbury, N. C., under which, it is stated, that industry agrees to use Cyclone trucks exclusively. The manufacturers expect to begin deliveries on this order within two or three weeks. It is understood that the purchasers will, during the next twelve months, require from 400 to 500 trucks, as they have a large organization operating principally in North and South Carolina, Georgia, Virginia and Florida.

#### A Pencil Always Sharp.

A new mechanical lead pencil on the market is called "Perfect Point," and is described in a circular issued by its makers, the Stull, Boylson Company of Fremont, O., as a substantial device, the leads of which do not at any time require sharpening. It is made in gold and silver styles, and of popular size. The leads are prepared in refill magazines, so that when one magazine is empty it can be quickly replaced with a new one full of leads. The pencil is also equipped with an eraser. It is said that it will save time, money and annoyance.

#### Trade Literature.

##### A Fine Paving Booklet.

"Evolution in Pavements" is the title given to the contents of the new Bitoslag booklet, issued by the Bitoslag Paving Co., 50 West St., New York. This publication tells all about the admirable characteristics of this paving material, and cites, with illustrations, numerous examples of its application to streets, roads, etc., where traffic is heavy. "The chief characteristics of Bitoslag," it is stated, "are its homogeneity, density and wearing qualities." The booklet is very attractively prepared, and the pictures are superior.

##### Dependable Factory Buildings.

"Dependability in Factory Construction," a book issued by McMeans & Tripp, engineers, Indianapolis, Ind., affords in the following quoted sentences a good general idea of the kind of work this firm does: "Dependable design of a manufacturing plant of the modern type, which provides against known contingencies that may arise, requires something more than the technical skill needed to give shape and artistic tone to buildings. It requires a knowledge of present-day methods of handling materials, driving and operating machines, supplying steam, water, air and electricity, disposing of wastes, and providing for the comfort and convenience of workers." This covers service to manufacturers in planning new undertakings or extensions of existing establishments, designing buildings and all equipment, contracts being arranged with builders and concerns supplying equipment, and also supervision of the entire work until it is finished. This publication, which is finely and attractively prepared, contains many illustrations of plants constructed under the direction of this firm. Accompanying each picture is an appropriate description.

##### Cars of Various Kinds.

The Continental Car Co. of America, Inc., Louisville, Ky., who have for 15 years manufactured dump cars of different kinds for various purposes, have issued a handsome new catalog with full descriptions, accompanied by illustrations showing cars engaged in a great variety of work. The policy of the company is expressed in their steady adherence to the ideal of maintaining the strength and efficiency of their products at all costs, and the good will thus built into them has placed them in a front-rank position in the market. Besides dump cars of different sizes

(Continued on Page 138)

## Have the Factors That Caused the Decline in Cotton From Forty-Three to Thirteen Cents Spent Their Force or Not?

This question cannot be answered positively in the affirmative. But the wisest investors are those who buy just before the turning point.

The most pessimistic news now emanates from Europe. This is always the case when supplies are large in America and small in Europe, as at present.

Neither the mills in America nor abroad hold any reserve stocks of cotton. Cotton is selling throughout the South, especially the grades below Middling, not only far below the cost of production, but materially below the prices prevailing before the great war.

### COMPARE THE FOLLOWING QUOTATIONS:

		July, 1914	February, 1921
Middling	Augusta	13 5-16	13c.
St. Low Mid.	Augusta	13 1-16	11c.
Low Middling	Augusta	12 9-16	9 1-4c.
Good Ordinary	Augusta	11 3-16	6 1-4c.

These differentials off Middling are too wide. The official Government tests of relative spinning value show them to be unwarranted. The spinner will turn to these cheaper cottons when he realizes the error in overlooking their value. The inevitable narrowing of these differentials thus resulting will, in our opinion, pay carrying charges for a year or more on an investment in the medium or lower grades.

The present cotton condition is due to world-wide financial conditions and the necessity of the Southern farmer to convert some of his product into cash.

New factors of a constructive character are beginning to assert themselves, and it is not at all improbable that they will act as a complete offset to the item of financial strain. Here is a partial list of them:

**Constructive policy of the new Administration.**

**Reduction in Government expenditures already planned.**

**Revised taxation methods and no excess profits tax.**

**Lower manufacturing costs through lower wages and more efficiency on the part of Labor.** Nothing could be more hopeful than the apparent willingness of Labor to agree to a reasonable wage revision.

**Demonstrated soundness of our banking situation.**

**Assurance of drastic curtailment of cotton acreage as well as reduction in the use of fertilizer, the effect of which will be felt about the time when the influence of other factors becomes operative.**

**FOR THESE REASONS WE BELIEVE THE PRESENT SITUATION GIVES THE WISE INVESTOR A CHANCE TO BUY SPOT COTTON AT BARGAIN COUNTER PRICES.**

We have complete facilities for making purchases, and have storage arrangements whereby we can warehouse 100,000 bales of this cotton in the Atlantic States Warehouse of Augusta, Ga., the largest bonded warehouse in the South Atlantic States.

Storage and insurance rates combined are 60c. per bale per month; cheaper than spot cotton can be carried in New York, and the price of this cotton is **MUCH CHEAPER THAN THAT OF FUTURE CONTRACTS.**

We confidently believe that an investment of this kind will yield a handsome profit in the next twelve months.

**We Respectfully Invite Correspondence From Those Interested.**

#### REFERENCES:

National City Bank, New York  
Guaranty Trust Co., New York  
National Shawmut Bank, Boston

**BARRETT & COMPANY, INC.**  
AUGUSTA, GA.

**The Largest Cotton Factors in the World**

(Continued from Page 136.)

and capacities, the company also makes flat cars, mine and quarry cars, stone cars, cars for lumbering operations and cane cars for sugar plantations, etc. A copy of the catalog will be sent by the company to anyone on request.

#### Motor Sweeper for Streets.

A new circular just issued by the Austin-Western Machinery Co. of Chicago is devoted to the merits of the Austin motor sweeper, which is illustrated as it appears in operation on streets of different surfaces. Eight reproductions of photographs afford an accurate idea of the fine qualities of the machine and its adaptability to all the needs of street cleaning. It is stated that it sprinkles, sweeps and collects all manner of street dirt in one operation, and then carries it to a dumping place, whether near or far. A gutter broom, in addition to the broom at the rear of the machine, enables it to clean the entire surface of the street.

#### Bullet-Proof Glass for Banks.

The Bankers' Protective Appliance Corporation, 5 Columbus Circle, New York city, have issued bulletin A-1 describing and illustrating their "Bullet Proof Protecto Armor Glass" for tellers' cages and other structures in banks and other institutions where there is danger of attacks by armed bandits. There is also an automatic door-closing device to prevent the escape of thieves. It is stated that this glass is specially made, and while a bullet may crack or chip it, the missile will not go through. Tests have been made with pistols of the heaviest calibers without penetrating the glass. With the glass are furnished equipment for specially armored openings so as to make protection complete.

#### Portable Sawmills.

Illustrations and descriptions of the Dixie Machinery Co.'s variable friction feed portable tie and sawmills are presented in folders issued by the company, whose address is 630 Commerce St., Shreveport, La. It is stated that with this feed the speed of the saw can be kept uniform at all times, and the range of feed varies from zero up to nine inches. Attention is also directed to the "Reliable" Heer two-cylinder opposed heavy-duty engine, which uses kerosene for fuel, and which, it is remarked, will "produce the same push and pull effect as occurs in a steam engine." The engine may also be used with distillate, gasoline or natural gas for fuel. The mills are made in two sizes, the "H" weighing 500 pounds and the "I" 300 pounds. Great economy and efficiency are claimed for these outfits.

#### Cranes and Shovels.

Victor R. Browning, Cleveland, O., manufacturers of Crawler cranes and shovels and locomotive cranes, have issued several finely prepared bulletins describing and illustrating their products. The outstanding feature of the Crawler cranes and shovels is their ability to travel anywhere that motive power can go, irrespective of road or soil conditions, the ground contact. It is noted, being vastly greater than in the case of mounting on wheels. Two styles of Crawler belts are made, either of which is supplied as may be desired. One consists of armor-plated wooden pads; the other has all-steel pads, each style of belt having advantages for certain ground conditions. Specifications are given in detail, and there are numerous pictures displaying these different machines engaged upon various work. Copies of the bulletins will be sent by the company to anyone on request.

#### Friction Clutches.

A handsome and artistically prepared publication is the new general catalog No. C-3, issued by the Hanson Clutch & Machinery Co. of Tiffin, O. This book, which is now ready for distribution, forms a convenient reference source for anyone using or intending to use friction clutches, as it is complete in every detail. It also shows that the application of clutches of this make is so comprehensive that nearly every condition of speed and other requirements of machine design and transmission of power can be met. It is noted that Hanson clutches have been installed rated from 1/6 horse-power to 1550 horse-power at 100 R. P. M., with the ratings conservative and at speeds ranging from 10 to 3000 R. P. M. It is also observed that these clutches occupy a reduced amount of space. The catalog, which is finely printed on very heavy calendered paper, is copiously illustrated, and there are many tables giving sizes, prices, etc.

#### Book Reviews.

Merchandising Studies of the States. By Archer Wall Douglas, with Preface by Merle Thorpe. New York: The Ronald Press Co. 1920. Pp. 178.

Eight States are covered by the author in this book, each under a separate heading. He considers their resources and development with a view to possibilities for business presented by each. Arkansas, Kansas, North Carolina, Wisconsin, Ohio, Texas, Colorado and California are treated in this order, the whole being preceded by an introduction and followed by an epilogue. Mr. Douglas endeavors to give the reader accurate information

concerning the spirit of the people in each of these commonwealths, their success in agriculture, manufactures and commerce, as well as in other lines of effort. He considers their transportation facilities, their modes of living, the composition of populations, etc., all of this information bearing upon the business opportunities that are to be discovered in each. Business men who read, study and "patiently fill in between the lines," as Mr. Thorpe remarks, will be rewarded, especially if they follow up this information by personal inspection of the several States before embarking upon the fulfillment of any enterprise which they may contemplate.

Manufacturing Industries in America. By Malcolm Keir, A.M., Ph.D. New York: The Ronald Press Co. 1920. Pp. 324.

In this volume Mr. Keir graphically and attractively presents the story of the foundation and growth of the great industries of the United States, including iron and steel, cotton, wool, leather, shoe and paper manufacturing. Besides several other industries, all in a manner which holds the attention of readers who are fond of history of economic development written in a painstaking and illuminating spirit. As the author truthfully says in his introduction, "There are few more interesting chapters in the history of the United States than those that record how Yankee enterprise and ingenuity won first place among the industrial nations of the world." After alluding to the especially rapid development of industries during the past six years, he says that now "this country will be obliged more and more to meet the competition of the European nations, for they are straining every effort to restore their former productive capacity and regain the markets abandoned upon the commencement of hostilities. \* \* \* The times call for extreme caution on the part of business men, as a single false step may lead to disaster." To every manufacturer this book will present valuable facts, enabling him to consider his own enterprise from a broader point of view, with the possibility of conducting it hereafter with greater opportunity of success.

Income Tax Procedure, 1921. By Robert H. Montgomery, C.P.A. New York: The Ronald Press Co. 1921. \$8.

In this volume, which relates to the Federal income tax on individuals, partnerships and corporations for income received during 1920, the author has given full consideration to the effect on both law and procedure of the multitude of Treasury Department rulings and

(Continued on Page 141)

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also court decisions made in the last twelve months; in fact, it is remarked that this edition of Mr. Montgomery's work covers all such conclusions attained up to January 15 of this year. There are 36 chapters, 10 composing Part I, which concerns the application and administration of the income-tax law; Part II, of 12 chapters considering and defining income; Part III, relating to deductions, and Part IV, to special classes of taxpayers. There are also an appendix and indexes. Notwithstanding the fact that there are over 1200 pages in the book, it is not bulky, although the paper on which it is printed is thin, but it is opaque. This volume is the first of a series of three works by the same author relative to the income taxes. The others, which are to follow this immediately, concern, respectively, Federal excess profits tax procedure and New York State income tax procedure, both for this year, the entire set costing \$15. Mr. Montgomery's previous writings on the income and excess profits taxes have heretofore been consulted by many business and professional men for making out tax returns, and they will doubtless be glad to know that he has in these new books given the latest information upon the subject.

## Financial News

### New Financial Corporations.

Ala., Gadsden.—Herzberg & Co., capital \$6000, organized with A. C. Herzberg, Prest.-Treas.; R. K. Foster, V.-P. and Secy.

Ark., Yellville.—Citizens Bank, consolidation of Bank of Yellville and Miners and Citizens Bank, organized with W. R. Jones, Prest.; Frank Pace, V.-P.; J. F. Carson, Cashr.

D. C., Washington.—American Commercial & Savings Bank, capital \$200,000, organized with Edward Voigt, Jr.

Fla., Daytona Beach.—East Coast Bank & Trust Co., capital \$50,000 and surplus \$25,000, organized with Fred. N. Conrad, Prest.; H. E. Pierce, V.-P.; C. A. Randall, Cashr.

Fla., Daytona Beach.—Peninsula Trust Co. will organize with \$50,000 capital.

Fla., Jacksonville.—Citizens Loan & Finance Co., capital \$100,000, organized with F. D. Pickering, Prest.; J. N. Burnett, V.-P.; Edwin Morgan, Secy.-Treas.

Fla., Lakeland.—Polk County Trust Co., capital \$300,000, organized with A. H. De Vane, Prest.; T. L. Wilson, V.-P.; J. L. Davis, Secy.-Treas.

Ga., Crawford.—Farmers' Bank of Crawford, consolidation of Farmers' Bank and Bank of Crawford, organized with Jas. F. Shehaue, Prest.; E. A. Veale, V.-P.; T. H. O'Neal, Cashr.

La., New Orleans.—New Orleans Bank & Trust Co., capital and surplus \$650,000, organized with Paul H. Laroussini, Prest.; Wm. J. Frees, V.-P.

Md., Baltimore.—United Merchants' Building and Loan Assn., 635 Equitable Bldg., capital \$250,000, inceptd. with Aaron Rosenberg, Max Hoff, Jacob Weber.

Md., Baltimore.—Waverly-Guilford Building & Loan Assn., 3312 Greenmount Ave., capital \$520,000, inceptd. with Harry B. Onion, Arthur B. Thompson, Gordon Gambrill.

Mo., St. Genevieve.—Will organize bank with R. E. Estel, Cashr., Perryville, Mo.

Mo., St. Louis.—Plans are being made for organization of Co-Operative Trust Co. with capital \$500,000 and surplus \$125,000. Address Samuel Nicholls.

Mo., St. Louis.—Republic National Bank chartered.

N. C., Charlotte.—Consolidated Investment Co., capital \$100,000, inceptd. with Adele B. Dunn, Hattie Burroughs, Addison G. Brenzier.

Okla., Duncan.—W. E. Reynolds and others have organized building and loan association.

Tex., Karvey.—Blue Ridge State Bank, capital \$10,000, organized with Em H. Robinson, Prest.; J. M. Swawarby, Cashr.

Tex., Penelope.—Penelope State Bank, capital \$25,000, inceptd. with H. J. Baker, Cashr.

Tex., Santo.—Santo State Bank, capital \$10,000, organized with W. S. Fant, Prest., Weatherford, Tex.; C. Hatchett, Cash., Santo.

Tex., Tom Ball.—Guaranty State Bank, capital \$10,000, organized with A. E. Woodson, Prest.; D. S. Crowley, Cashr.

Va., Farmville.—American Farmers-Laborers' Savings Bank, capital \$50,000, organized with D. W. Baker, Prest.; J. R. Augustus, Secy.

W. Va., Huntington.—Huntington Brokerage Co., capital \$10,000, inceptd. with W. H. Perry Huntington; J. T. Pauley, L. C. Summers; both Charleston, W. Va.

### New Securities.

Ala., Dothan.—Hydro-electric and School.—Will vote Mch. 1 on \$750,000 hydro-electric and \$100,000 school bonds; 6 per cent 20-year; R. W. Lisenby, City Clk. (Lately noted to vote Feb. 14.)

Ark., Fort Smith.—Bridge.—Bond Comm., J. M. Sparks, Chrmn., will sell \$150,000 of 6 per cent bridge bonds.

Fla., Arcadia.—Road.—May vote \$100,000 road bonds. Address De Soto County Commrs.

Fla., Daytona.—School.—Plans school-bond issue. Address Volusia County Board of Education, De Land, Fla.

Fla., Fort Pierce.—Sewer, Light and Water.—Will vote Mch. 15 on \$80,000 bonds, including \$60,000 light and \$20,000 water and sewer. Address The Mayor. (Supersedes recent item.)

Fla., Lake Worth.—Refunding.—Will issue \$115,000 refunding bonds; Alex. Drake, Mayor.

Fla., Miami.—School.—Will vote Mar. 15 on \$432,000 school bonds of Biscayne, Larkins, Homestead and Miami Distrs. Address Dade County Board of Education. (Lately noted contemplating.)

Fla., Quincy.—Masonic Temple.—Washington Lodge No. 2, F. & A. M., sold \$50,000 bonds at par. (Lately noted.)

Fla., St. Petersburg.—Gas.—Sold \$14,000 gas bonds to First National Bank and Central National Bank. Address The Mayor.

Fla., Tampa.—School.—Will vote on \$350,000 bonds of Special Tax School Dist. No. 4; J. E. Knight, Supt. Public Instruction. (Lately noted contemplating.)

Fla., Titusville.—Road and Bridge.—Will receive bids until Mch. 9 on \$175,000 of 6 per cent semi-annual \$1000 denomination bonds of Special Road and Bridge Dist. No. 6; N. T. Froscher, Clk. Brevard County Commrs.

Fla., Titusville.—School.—Will sell \$40,000 of 6 per cent \$1000 denomination Special Tax School Dist. No. 3 bonds, dated Jan. 1; S. J. Overstreet, Secy. to Board.

Ga., Augusta.—Refunding.—Will issue \$105,000 of 4½ per cent semi-annual \$1000 denomination bonds, dated May 1; W. P. White, Mayor.

Ga., Cedartown.—Road.—Will vote Mch. 15 on \$400,000 of 5 per cent semi-annual bonds. John K. Davis, Chrmn. Polk County Commrs. Roads and Revenues. (Lately noted.)

Ga., Columbus.—Street and School.—Sold \$300,000 of 5 per cent 29-yr. bonds to Bond

Dept. Trust Co. of Georgia. Address The Mayor. (Supersedes recent item.)

Ga., Columbus.—Bridge.—Will vote Mch. 1 on \$180,000 of 5 per cent semi-annual \$1000 denomination 29-year bonds; changed date from Jan. Address The Mayor.

Ga., Cordele.—Light and Water.—May vote on \$50,000 light and water bonds; J. Gordon Jones, Mayor.

Ga., Decatur.—Road.—Sold \$250,000 of 5 per cent 20-16 yr. road bonds to Bond Dept. Trust Co. of Georgia; L. T. Y. Nash, Commr. DeKalb County Commrs. Roads and Revenues. (Lately noted inviting bids.)

Ga., Ocella.—Light, Water and School.—Will receive bids until Mch. 7 on \$25,000 of 6 per cent light, water and school bonds; \$1000 denomination 29 year; E. L. Caldwell, City Clk.

Ga., Savannah.—School.—Will vote May 24 on \$1,500,000 bonds. Address Board of Education. (Supersedes recent item.)

Ga., Thomaston.—Road.—Will receive bids until Mch. 15 on \$150,000 of 6 per cent \$500 denomination bonds, dated Jan. 1, 1921, due serially: \$7500, Jan. 1, 1932; \$7500 each year to and including Jan. 1, 1951; M. H. Sandwich, Clk. Upson County Commrs. Roads and Revenues.

Ga., Vidalia.—Sewer.—May vote on sewer bonds. Address The Mayor.

Ky., Whitesburg.—Road and Bridge.—Will receive bids until Apr. 6 on \$300,000 of 5 per cent \$500 and \$1000 denomination 20-year bonds, dated Apr. 6, 1921. Address Fess Whiteaker. (Lately noted voting.)

La., Houma.—Electric and Water.—Will vote Mch. 15 on \$180,000 of 5 per cent semi-annually 20-year electric and water bonds; H. M. Bourg, Mayor.

La., New Iberia.—Road.—Will receive bids \$60,000 Road Dist. No. 1, \$23,000 Road Dist. No. until Mch. 15 on \$295,000 road bonds as follows: 3, \$47,000 Road Dist. No. 5, \$45,000 Road Dist. No. 8 and \$110,000 Road Dist. No. 6; Paul Bassin, Secy. Iberia Parish Police Jury.

La., St. Martinville.—School.—Will receive bids until Mch. 10 on \$300,000 of 5 per cent 20-year school bonds; W. C. Perrault, Secy. St. Martin Parish School Board.

Miss., Greenwood.—Road.—Did not sell \$300,000 of 6 per cent road bonds offered on Feb. 8; A. R. Hew, Clk. Le Flore County Supvrs. (Lately noted inviting bids.)

Miss., Gulfport.—School.—Sold \$45,300 bonds to First National Bank. Address Board of Education.

Miss., Meridian.—Culvert and Bridge.—Will receive bids until Mch. 8 on \$150,000 of 6 per cent \$500 denomination bonds; Geo. F. Hand, Clk.

Miss., Moorhead.—School.—Will receive bids until Mch. 1 on \$30,000 of 6 per cent semi-annual 500 denomination 20-year bonds of Moorhead Separate School Dist.; C. W. Allen, Town Clk.

Miss., Pascagoula.—Road.—Will vote Mch. 11 on \$180,000 road bonds. Address Jackson County Commrs.

Miss., Starkville.—Road.—Will vote Mch. 8 on \$18,000 road bonds. Address Oktibbeha County Commrs.

Miss., Vicksburg.—Road.—Will sell \$390,100 of 6 per cent road bonds in March; Alex. Fitz Hugh, Chrmn. Warren County Highway Commission.

Mo., Fulton.—Water and Light.—Will vote in April on \$75,000 water and light bonds. Address The Mayor.

Mo., Galena.—Road.—Will sell \$100,000 road bonds; H. P. Moberly, Div. Engr., Springfield, Mo.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



Mo., Joplin—School.—Defeated \$675,000 bonds of Joplin School Dist.; C. S. Bankard, Secy. Board of Education. (Lately noted to vote.)

Mo., Neosho—Road.—Voted \$22,000 road bonds. Address Newton County Comms.

Mo., Shelbyville—Road.—Will vote Mch. 3 on \$10,000 and \$7000 bonds of Shelbyville and Bethel Special Road Dist. Address Shelby County Comms.

Mo., Trenton.—Trenton Township sold \$135,000 of 6 per cent semi-annual \$1000 denomination bonds, dated April 15.

Mo., Trenton—Drainage.—Will receive bids until Mch. 7 on \$225,000 of 6 per cent 20-yr. bonds of Grand River Drainage Dist. No. 2 and \$100,000 of 6 per cent 20-yr. bonds of Muddy Creek Drainage Dist. No. 1; H. J. Bain, Secy., Grundy County Supvrs.

Miss., Hattiesburg—School.—Will receive bids until Mch. 17 on \$365,000 of 6 per cent semi-annual bonds; T. E. Batson, Mayor. (Lately noted.)

N. C., Asheville—Street.—Sold \$160,000 of 6 per cent \$1000 denomination bonds, due \$10,000 1922 to 1928 and \$15,000 1921 to 1934, to Stifel-Nichols Investment Co., St. Louis, Mo., at par and accrued interest; G. C. Hunter, City Secy.-Treas. (Lately noted inviting bids.)

N. C., Asheville—Refunding.—Sold \$32,000 funding bonds at \$160 premium and 6 per cent interest to Junius Adams; G. C. Hunter, City Secy. and Treas. (Lately noted inviting bids.)

N. C., Charlotte—School.—May issue \$30,000 to \$35,000 bonds. Address Mecklenburg County Board of Education.

N. C., Columbus—Electric.—Will receive bids until Mch. 1 on \$25,000 of 6 per cent electric bonds; E. C. Watts, Mayor.

N. C., Columbia—Street and Electric.—Will receive bids until Feb. 28 on \$5000 of 6 per cent 5-year street bonds and \$10,000 of 6 per cent 20-year electric bonds. Address S. S. Woodley, Cashr., Tyrrell County Bank.

N. C., Dunn—Water, Street and Sewer.—Will issue \$125,000 bonds, including \$50,000 water, sewer and street and \$75,000 school bonds. Address The Mayor.

N. C., Dunn—School.—Will vote on \$100,000 school bonds. Address J. W. Draughan.

N. C., Durham—School.—Will issue \$24,000 school bonds. Address Durham County Commissioners.

N. C., Elm City—Electric.—Will issue \$25,000 electric bonds; Clarence Winstead, Town Clk.

N. C., Granite Falls—School.—May vote in spring on \$75,000 school bonds. Address Board of Education.

N. C., Hamlet—Street.—May vote on \$100,000 street bonds. Address The Mayor.

N. C., Hendersonville—Road and Bridge.—Sold \$75,000 of 6 per cent 2-31-year serial bonds, dated Jan. 1, 1921, to First Bank & Trust Co., at 100.3 and interest; H. G. Edney, Register of Deeds. (Lately noted inviting bids)

N. C., Lenoir—School.—May vote in spring on \$200,000 school bonds. Address Board of Education.

N. C., Morganton—School.—Voted \$75,000 school bonds. Address Board of Education.

N. C., Newland—Road and Bridge.—Sold \$150,000 of 6 per cent semi-annual \$1000 denomination bonds to Hanchett Bond Co., Chicago, at par and interest; A. W. Ray, Chrmn., Avery County Comms. (Lately noted inviting bids.)

N. C., Pollocksville—Water and Light.—Will receive bids until Mch. 14 on \$35,000 of 6 per cent semi-annual \$1000 denomination 34-year light and water bonds; H. A. Creach, Treas.

N. C., Selma—School.—Will receive bids until

Mch. 17 on \$175,000 of 6 per cent semi-annual \$1000 denomination 25-year bonds, dated Jan. 1, 1921; R. J. Noble, Chrmn. Board of Trustees.

N. C., Smithfield—Courthouse and Jail.—Sold \$500,000 of 6 per cent semi-annual \$1000 denomination 30-year bonds, dated Jan. 1, to Prudden & Co., Toledo, O., at par, with premium of \$10,800; W. T. Adams, Clk., Johnston County Comms. (Lately noted inviting bids.)

N. C., Wilkesboro—Road.—Will vote on \$130,000 road bonds. Address Wilkes County Commissioners.

Okla., Edmond—Water.—Will sell \$36,000 of 6 per cent semi-annual \$1000 denomination 5 to 20-year water bonds, dated Feb. 21, 1921; John Roaten, Mayor.

Okla., Oklahoma City.—Will sell \$750,000 of 5 per cent 1-25-year road bonds; Tom Bodine, County Clk.

Okla., Sapulpa—Clubhouse.—Elks' Club will vote on \$100,000 bonds.

Okla., Wynona—Sewer and Water.—Will receive bids on \$145,000 sewer and \$155,000 water bonds; O. E. Estes, City Clk.

S. C., Charleston—Bridge.—Sold \$200,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Jan. 2, through Lawrence M. Pinckney, for \$101 and accrued interest; W. King McDowell, Chrmn., Santee Bridge Dist. of Charleston, Berkeley and Williamsburg Counties. (Lately noted inviting bids.)

S. C., Columbia—Street.—Sold \$300,000 of 6 per cent \$1000 denomination bonds to Guaranty Trust Co., New York, at \$311.133 and accrued interest. Address Mayor Blalock. (Lately noted inviting bids.)

S. C., Gaffney—Refunding.—Will vote Mch. 4 on \$100,000 funding bonds; J. H. Turner, Mayor.

S. C., Newberry—Street, Water, Sewer and Electric.—Will receive bids until Feb. 24 on \$190,000 of 5½ per cent bonds, including \$100,000 of 30-year street; \$52,000 of 25-year water; \$20,000 of 15-year sewer and \$18,000 of 10-year electric bonds; T. K. Johnstone, Secy., Bond Comsn.

S. C., Spartanburg—School.—Sold \$300,000 of 6 per cent school bonds to New York firm for \$302,172 net. Address The Mayor. (Supersedes recent item.)

Tenn., Chattanooga—School.—Will receive bids until Mch. 1 on \$100,000 of 6 per cent semi-annual \$1000 denomination 30-year bonds, dated Mch. 1. Address Alexander W. Chambliss, Mayor, Municipal Bldg.

Tenn., Knoxville—Street and Funding.—Will receive bids until Mch. 1 on \$100,000 street and \$400,000 funding bonds; John L. Greer, Recorder. (Lately noted.)

Tenn., Knoxville—Water-works Refunding.—Will receive bids until Mch. 1 on \$487,000 of 6 per cent 12½-year water-works refunding bonds; John L. Greer, City Recorder.

Tenn., Nashville—Memorial.—Sold \$600,000 of memorial bonds to Caldwell & Co. and American National Securities Co. at 97 and interest. Address City Comms. (Lately noted inviting bids.)

Tenn., Ripley—Refunding.—Will receive bids until Feb. 21 on \$200,000 of 6 per cent semi-annual refunding bonds; C. S. Carney, Lauderdale County Clk.

Tex., Cuero—Road.—Will sell \$40,000 of 5 per cent \$500 denomination 30-year bonds, dated Oct. 10, 1918. Address J. L. Boal, County Judge. (Supersedes recent item.)

Tex., Dallas—Incinerator.—Will vote in Apr. on \$200,000 garbage incinerator bonds. Address The Mayor.

Tex., Dallas—Levee.—Levee Dist. No. 6 will vote Feb. 28 on \$70,000 bonds. Address Dallas County Comms.

Tex., Edinburg—Jail.—J. L. Arlitt, 141 Broad-

way, New York, purchased \$100,000 of 7 per cent semi-annual \$1000 denomination jail warrants, dated Dec. 1, 1920.

Tex., Fort Worth—Improvement.—Will sell \$1,100,000 improvement bonds. Address Finance Commr. Manning.

Tex., Fort Worth—Water-works.—Harold G. Wise & Co., Houston, Tex., are offering \$300,000 of 5 per cent water-works revenue notes, maturing \$10,000 monthly, starting Oct. 1, 1921.

Tex., Giddings—School.—Registered \$12,420 Lee County Common School Dist. 16, 19, 27, 28, 33, 34, 38 and 40 bonds; 5 per cent maturing 2-20, 1-10, 3-20 and 1-30 years.

Tex., Harlingen—School.—Will vote Mch. 15 on \$30,000 school bonds. Address Supt. Harlingen Independent School Dist.

Tex., Houston—Drainage.—Drainage Dist. No. 10 in Little York vicinity voted \$50,000 bonds.

Tex., Memphis—School.—Hall County Common School Dist. No. 22 registered \$8000 of 5 per cent 40-year bonds with State Comptroller.

Tex., Rusk—Road.—Attorney-General's Department approved \$300,000 of 5 per cent serial Cherokee Road Dist. No. 3 bonds. Address Cherokee County Comms.

Tex., Spur—School.—State Comptroller registered \$3000 of 5 per cent 10-40-year bonds.

Tex., Waco—Refunding.—Will receive bids until Feb. 17 on \$96,000 refunding bonds; 5 per cent semi-annual \$1000 denomination 30-year, dated Jan. 1, 1921; W. H. Cockcroft, Finance Commr.

Va., Danville—Street.—Will receive bids until Mch. 1 on \$100,000 of 5½ per cent semi-annual \$1000 denomination bonds, dated Mch. 1, 1921; maturing serially \$4000 annually Mch. 1 in each year beginning 1922; Robert Brydon, City Clk.

Va., East Radford—Street.—May vote on \$400,000 bonds. Address Mayor Gilbert.

W. Va., Beckley—Street and Sewer.—Will vote Mch. 22 on \$85,000 bonds, including \$65,000 street and \$20,000 sewer. Address The Mayor.

W. Va., Charleston—Incinerator.—May vote on incinerator bonds; H. H. Snallbridge, Chrmn. of Comm.

W. Va., Lewisburg—School.—Will receive bids until Mch. 1 on \$37,500 of 6 per cent \$500 denomination bonds of Lewisburg Independent School Dist. of Greenbrier County; Finley M. Arbuckle, Secy.

W. Va., Wellsburg—Will receive bids until Feb. 26 on \$25,000 of 5-20-year school bonds of Cross Creek School Dist., Brook County; A. F. Young, Supt. Public Schools, Follansbee, W. Va.

## Financial Notes.

Greenville-Carolina Trust Co., Greenville, S. C., increases capital from \$25,000 to \$50,000.

Frisco Guaranty State Bank, Frisco, Tex., increases capital and surplus \$35,000 each.

Border Mortgage Co., El Paso, Tex., increases capital from \$50,000 to \$100,000.

Holland Banking Co., Springfield, Mo., will increase capital from \$290,000 to \$400,000.

First National Bank, Konowa, Okla., increases capital from \$15,000 to \$40,000.

Holston National Bank, Elizabethton, Tenn., increases capital from \$25,000 to \$50,000.

First National Bank, Farmville, Va., increases capital from \$25,000 to \$100,000.

Dallas Building and Loan Assn., Dallas, Tex., increases capital from \$500,000 to \$1,000,000.

East Coast State Bank, Daytona, Fla., re-organized and increased capital from \$25,000 to \$50,000.